FERTILITY DIFFERENTIALS AND THE REDEFINITION OF THE NORMATIVE STRUCTURE ACROSS RACIAL/ ETHNIC LINES

A Dissertation

by

MARIA ISABEL AYALA GARCIA

Submitted to the Office of Graduate Studies of
Texas A&M University
in partial fulfillment of the requirements for the degree of

DOCTOR OF PHILOSOPHY

December 2007

Major Subject: Sociology

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Approved by:

Chair of Committee,	Rogelio Saenz
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ABSTRACT

Fertility Differentials and the Redefinition of the Normative Structure Across Racial/Ethnic Lines. (December 2007)

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The United States has seen tremendous growth since it has achieved a population of 300 million. Interestingly, events like this mask the heterogeneity of fertility behavior particularly along racial/ethnic lines. Unfortunately, despite the voluminous literature examining the dynamics and differentials of fertility, extant studies suffer from several limitations including the treatment of racial/ethnic groups as homogenous, the cross-sectionality of their analyses, or their focus on either current or cumulative fertility ultimately underplaying the complexity of fertility behavior. Therefore, this dissertation investigates the fertility behavior of Mexican American and white women paying particular attention to race/ethnicity and social mobility by conducting a quantitative analysis of current and cumulative fertility behavior of women at three different points in their life course. The findings demonstrate the significant effect that socioeconomic characteristics and race have on explaining the higher fertility of Mexican American women in the United States thus, encouraging the adoption of a racial/ethnic stratification framework in studies of fertility.

ACKNOWLEDGMENTS

There are many people who have encouraged, advised, cheered, and mentored me during the process of writing this dissertation, and I feel the need to thank them. First, I would like to thank Dr. Mark Fossett, Dr. Dudley Poston, and Dr. Cruz Torres, my committee members, for their suggestions and support during my studies and the process of this dissertation. I also want to thank Dr. Richardson, who since my undergraduate studies taught me how exciting sociology is. In particular, I would like to thank Dr. Rogelio Saenz, my committee chair and mentor. Dr. Saenz, thank you for always being there offering mentorship, support, and friendship throughout this challenge. You have helped me achieve this dream of mine. Thank you!

I would like to thank the driving force in my life. Mamiringa y Papiringo, muchas gracias por su amor, sus consejos, y todos los sacrificios que han hecho para que hoy yo pueda alcanzar esta meta. Sofi, my best friend, my sister, thank you not only for the patience and support you have given me, but for the love you have shown me that will always surpass any challenge we encounter. Finally, Ricardo, thank you for all those weekends that you accompanied me to school so that I could finish my work, for staying awake listening to all my worries and encouraging me to do the best I could, and for all the sacrifices you have also made in your life so that I could accomplish this goal of mine. Te amo!

Just as I love my biological family, I love and thank the one I have come to know. Judith, muchas gracias por todo el cariño y apoyo que me has dado todos estos

años. Stephanie, el vivir este proceso viéndote crecer y volviéndonos amigas y familia ha hecho que recuerde el no perder la niña que llevo dentro. Javier, tu entusiasmo y alegria aun en momentos dificiles, me inspira.

Also, I want to acknowledge my friends and colleagues in the Sociology Department. Especially, I would like to thank two wonderful friends who not only inspired me to become a better scholar, but who most importantly offered me the friendship to make it to the finish line. Thank you Lore and Karen, I love you!

Finally, I thank you lifetime friends, Mey, Gaby, Yanuit, Carla, Karlita, Alex y Mau. All of you were always in my heart encouraging me to keep going even when I thought of giving up. You encouraged me in ways you could never imagine. Thank you for being there always in heart and through emails and phone calls. All of you are extraordinary people.

Thank you everyone, I am fortunate to have you in my life.

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CHAPTER I

INTRODUCTION

Fertility is a natural event that influences the demography of the world's population in different ways not only through time, but also across social, cultural, and economic groups. Primarily, fertility has had an important role for population growth. In October 2006, the United States attained a historical population record of 300 million people. Interestingly, events as these mask the heterogeneity of fertility behavior especially in a country as diverse as the United States. According to the National Center for Health Statistics (NCHS) (2003), the United States has reached a total fertility rate (TFR) of 2.0 placing it below its replacement level. However, when fertility behavior is examined closely, higher fertility rates are found among the Latino population compared to other groups. For example, according to the NCHS in 2001 the TFR of non Hispanic-Whites was 1.8 compared to African Americans with 2.0, American Indians 1.7, Asian Americans 1.8, Latinos 2.7 and specifically, Mexicans 2.9. In his 2002 publication, Kohler (2002) argues that one of the reasons why European countries have achieved a low fertility has to do with the socioeconomic changes that have made postponing fertility a rational response. Therefore, taking into account that the United States is a country of immigrants, and recognizing the complexity of population growth, it is

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important to analyze the reasons and dynamics related to fertility behavior, and furthermore, its relationship with the social construction of status and mobility among the U.S. population.

In the past decade, interest in the study of fertility in the United States has increased due to the differentials found across racial lines and furthermore, because it intersects with immigration discourse. In trying to understand the fertility differentials of the United States, Mexico has gained interest among scholars as it is the source of the largest migration flow of humans across national borders in the world (Phillips and Massey 2000). According to the Yearbook of Immigration Statistics (2005), between 1960 and 2005, Mexico has sent 5,868,908 immigrants. Therefore, migration is very relevant not only for its economic, political, and social impacts for the community of origin, but also for the community of destination, especially as it relates to fertility behavior. The importance of this research lies not only in the diversity of fertility patterns masked by the United States TFR of 2.0, but also, on its impact in the near future. Today, scholars have recognized that the migrant population has added to the millions of people that already compose one of the largest minority groups in the United States.

When the higher fertility among Mexican American women in the United States is studied, many have argued that it is the result of the pro-natalistic culture in Latin American, particularly Mexico (TFR 2.7). However, this explanation has been challenged on two grounds. First, Mexico has had a significant and stable decline in fertility in the past three decades. According to the Instituto Nacional de Estadística,

Geografía, e Informática (2006), since the mid 1970s, México has seen a reduction in its total fertility rate (TFR) from 5.7 to 2.2. This incredible reduction is very significant as it took place in a couple of decades. Second, research has not been able to explain the higher fertility levels of Mexican-origin women ages 18-24 of third- and higher-generations in the United States compared to their earlier-generation counterparts (Frank and Heuveline 2005). Ultimately, these challenges question a rigid and static view of the normative structure and system of practices related to fertility across racial groups in the United States. Furthermore, they motivate researchers to understand the reasons behind these differentials. Unfortunately, even when scholars have attempted to fully comprehend fertility behavior, they have only achieved an incomplete understanding due to the cross-sectional nature of their studies. Therefore, Mason (1997) argues that when studying fertility, it is necessary to critically examine the complexity of fertility decision making going beyond cost-benefit assumptions.

In recent decades, fertility studies have analyzed the intersectionality between fertility and migration, and critical scholars have come to pay special attention to the effects that generational status has on the normative structure of the United States. Normative structures are the ideas, values, and beliefs that rule social life (Levitt 1998). In many societies, the normative structure involves norms and beliefs regarding social mobility and the expectations that society has on people during this process. Even when in theory people can achieve structural integration, studies show that mobility occurs at different rates for different races, and in many cases, it does not occur at all (Coleman 2003; Darity and Mason 1998; Waters and Eschbach 1995).

Many studies of social inequality have focused on structural conditions that encourage or challenge people's mobility (Levy 1995, McCall 2000, Poston 1994). However, fewer studies have examined the interaction among fertility, generational status and race, especially for women. The lack of studies on this subject is perpetuated on the one hand, by the higher status that men's human, cultural, and social issues continue to hold in society compared to women's and on the other, the perception of women as passive (Trigueros 1992). Unfortunately, measuring perceptions, ideas, and beliefs is a challenging task. Therefore, Peggy Levitt (1998) proposes the operationalization of these issues as systems of practice.

Levitt (1998:934) defines systems of practice as "the actions shaped by normative structures. For individuals, these include household labor, religious practices… patterns of civil and political participation" and fertility behavior. Because of the heterogeneity of the American culture, it would be a mistake to assume that all racial and ethnic groups agree with and internalize the dominant normative structure and thus, observe the systems of practices (fertility behavior) in the same way.

In addition, because the topic of fertility is very complex, several hypotheses have been developed to understand it. Mason (1997) suggests providing fertility transition models that are ideational and interactive to recognize the changing perceptions that drive fertility change and how the impact of fertility change depends on preexisting conditions in the population. In the Western literature, four of the commonly cited hypotheses related to fertility are the cultural perspective, the social characteristics

(assimilation perspective), the minority status, and the racial/ethnic stratification perspective.

According to the cultural characteristics hypothesis, fertility differences between minority and majority groups are the result of cultural norms and values that support large families (Poston et al. 2005). Thus, the higher fertility pattern of Mexican Americans is thought to be the product of pro-natalistic ideologies that originate in Mexico (Rindfuss and Sweet 1977; Frank and Heuveline 2005). Among scholars that support this hypothesis, there is the assumption that Mexican Americans are exposed and end up internalizing high fertility expectations from the social remittances brought about by Mexican immigrants (Frank and Heuveline 2005). However, this argument has been challenged primarily on the ground that Mexico has seen a tremendous reduction in its fertility in the past several decades. Some scholars have also criticized the assumption that native Mexican Americans will internalize the normative structure of Mexico rather than the ideas, values, and expectations of the United States. Therefore, some people (e.g., Frank and Heuveline 2005) have suggested that the origin of higher fertility stems not from the impact of sending communities, but of the social characteristics of racial/ethnic groups in the United States.

According to the social characteristics hypothesis, fertility differentials among racial/ethnic groups are the result of social characteristics (Poston and Chang 2004). Supporters of this hypothesis suggest that differences in education, income, wealth, and occupation result in fertility differentials. Nevertheless, it is important that when testing the applicability of this hypothesis, one recognizes the influence of the immigrant history

of the United States and thus, include an examination of the assimilation process. Park and Burgess (1921) developed the assimilation model, which has become the dominant perspective in the study of migration and fertility.

The assimilation perspective acknowledges the influence that the country of origin has on the fertility patterns of migrants. However, it argues that with time, immigrants will adapt their “fertility levels to that of the United States as they become more assimilated into American society” (Kanh 1994:503). Thus, even when the immigrant’s culture poses a great positive effect on their fertility, this effect will weaken the longer the immigrant has been in the United States (Chiswick 1979; Ford 1990; Gordon 1964; Kanh 1988; Rindfuss 1976).

In addition, assimilation has a dynamic nature. In the assimilation hypothesis, there is a built-in assumption that the country of origin affects the fertility patterns of people, especially of immigrants. This "membership" effect may vary depending on the subgroup that the person belongs too and will determine the level of influence that the country of origin will pose on the migrant’s fertility behavior (Kanh 1988). Thus, the country of origin's influence is considerably weaker among immigrants who are positively selected with respect to their sending country populations, “presumably because they adapt more rapidly to the destination society” (Kanh 1988:112).

However, the social characteristic hypothesis, and its argument based on assimilation, has also received criticisms. First, this hypothesis is unable to account for fertility differentials even among women with the same socioeconomic status. Second, this model does not specify the time period in which assimilation is suppose to happen

(Lyman 1968). To try to overcome some of these criticisms, the minority status hypothesis emerged.

When examining the fertility literature, membership in a minority group is assumed to have "an independent effect on the fertility behavior of the group" (Poston and Chang 2004:11). Furthermore, it is suggested that this effect will differ depending on the group's socioeconomic standing. Therefore, minority status will have a pro-natalistic effect on a group's fertility level; however, minority group members with a higher socioeconomic standing will lower their fertility as the majority group may continue to be perceived as the ideal model or that fewer children allow for opportunities for advancement. Moreover, it is hypothesized that if a higher order generation Mexican American woman is unable to achieve upward mobility, she may redefine the normative structure and in particular the systems of practice that defines high fertility as a source of limitation and thus, perceive high fertility as a source of empowerment.

In the end, even when the cultural, social characteristics and minority status hypothesis have received some support, they have also been criticized. Frank and Heuveline (2005) have challenged the "first generation" hypothesis of fertility and argue that a comprehensive study of fertility should adopt a racial/ethnic stratification perspective to achieve a closer understanding of its dynamic process.

One of the basic premises of the racial/ethnic stratification hypothesis is that race is a socially constructed concept (McDaniel 1996). Therefore, this "perspective seeks to place racial differences within a socio-historical context that is sensitive to cultural and historical distinctions" (McDaniel 1996:141). Hence, when studying fertility

differentials, it is necessary to understand the social context in which it takes place. Furthermore, Frank and Heuveline (2005) argue that differences in life experiences of Mexican origin groups are the reason why such fertility differential exists. The argument is that every generational status group is working to obtain upward mobility. First-generation immigrants are very likely to want to achieve the "American dream" and therefore, engage in migration. Once they arrive in the United States they face many challenges and even when the attempt is made to achieve structural integration, they may be unable to do so. Thus, when the second generation arrives, the investment is made for them to have the human capital to achieve this mobility. Any advances made at this point, may be compared to the context prior to immigration, and thus, be seen positively. However, for third-generation individuals the situation may be different. If third- or higher-generation women have not been able to achieve mobility, they may reject assimilation into the majority group and instead may see a different group as the ideal, thus deciding to take the route of ethnic resilience or segmented assimilation which may influence their fertility behavior (Portes and Zhou 1993; Waters 2001). Ultimately, it is by recognizing this complexity, that it is important for fertility research to assess the impact of the socioeconomic standing of women on fertility decisions, especially across racial and generational lines in a country like the United States.

In this dissertation, I will examine the relationship between immigration and fertility using a longitudinal approach. Specifically, my analysis will examine the intersectionality of fertility, generational status, and social inequality by adopting a racial stratification framework (Frank and Heuveline 2005; McDaniel 1996). The need for this

research is essential in the case of the United States where fertility and migration play a prominent role in the demographic composition of the country. Therefore, drawing from different bodies of literature, the present study asks whether the normative structure and systems of practice of the United States, as they relate to fertility behavior, are challenged along racial/ethnic lines.

This dissertation consists of five chapters. This first chapter has provided an overview of the research that will be undertaken in this study. Chapter II will examine the literature related to fertility differentials in the United States across racial groups with a particular emphasis on Mexican American fertility. This chapter begins with a demographic, social, and economic description of fertility. The chapter subsequently introduces some of the current perspectives that attempt to explain Mexican American fertility by incorporating the topics of race and mobility. Chapter III will describe the data used in this study and the methods employed in the data analysis for this research. Chapter IV will provide a discussion of the findings from the data analysis. Finally, Chapter V will present an overview of the major findings and a discussion of the implications of the results.

CHAPTER II

LITERATURE REVIEW

I. Introduction

The study of fertility is one of great relevance for understanding the past, present, and future of our world's population, but also to examine the dynamics of social, cultural, and economic groups since "the fertility of human populations has both biological and social aspects" (McDaniel 1996:135). In recent decades, the United States has shown an increasing interest in the study of fertility behavior not only because it has reached below replacement fertility with a total fertility rate of 2.0, but also because of its aging population (Frank and Heuveline 2005). Unfortunately, overall, the validity and reliability of previous studies that attempt to explain fertility differentials across groups has been questioned. First, studies based on racial/ethnic groups tend to treat each group as homogenous underplaying intra-group differences while also emphasizing nonLatina/o-Latina/o comparisons (Forste and Tienda 1996). Second, most studies on fertility have been conducted using cross-sectional data. The reason for this lies in the lack of complete birth histories which impedes a fuller understanding of fertility behavior (Carter 2000). Longitudinal data with complete birth histories would allow tracking the parity-specific birth behavior of women and "help to elucidate the age, period, or cohort effects influencing their fertility" (Frank and Heuveline 2005:94). Finally, most fertility studies lack contextual indicators, therefore neglecting the

experiences of minority groups who do not have a recent history of immigration (e.g., blacks and Native Americans) (Forste and Tienda 1996). Therefore, in this chapter, I will examine the current literature that relates to this dissertation. I will begin by describing some of the literature that sets the foundation for the study of fertility. Subsequently, I will discuss the fertility trends in the United States and how they vary across racial/ethnic categories. I will also explain the importance of decomposing the Latina/o category while engaging in an in-depth analysis of the Mexican American fertility behavior. While doing this, I describe the differentials in fertility patterns across generational statuses. Therefore, a brief discussion of the relevance of migration for Mexican Americans and the dynamics of integration and mobility across racial groups will follow. Fourth, I will provide a comparative discussion of the western fertility hypotheses developed through time and address their strengths and weaknesses. Finally, I will bring together the literature to introduce the driving thesis behind this dissertation: that the fertility differentials between Mexican Americans and whites are the result of differences in the definition of the normative structure of the United States.

II. The Study of Fertility

Through time, many perspectives have been developed to explain the dynamics of fertility behavior across populations. Proximate determinants (Bongaarts 1982), the demographic transition theory (Caldwell 1982), political economic perspectives of fertility (Greenhalgh 1990), wealth flow's models (London and Hadden 1989) among other theories have been developed to understand how and why populations vary on their

fertility patterns. These perspectives address fertility in various ways, e.g., the result of rational decisions or other events. Overall, it is known that fertility has declined so much in some countries that it has reached below replacement levels (TFR 2.0), thus achieving "lowest low fertility" lines (Kohler et al. 2002). In due course, many scholars agree that lower fertility is achieved by a combination of social, cultural, and economic factors that make the postponement and decline of fertility rational responses (Kohler et al. 2002; Poston 2000). The relevance of this decline in fertility lies in the demographic impact that it has for societies, such as the emergence of a rapidly aging population, the substantial reduction of the relative cohort size, or the change in racial composition. In addition, fertility decline has an economic impact on the lives of people, such as the role that it plays in people's social mobility (Kohler et al. 2002). Therefore, in an era of post-industrialization, an understanding of the factors and processes involved in intra- and inter-group fertility behavior is crucial, and the social and cultural diversity of the United States—due especially to disproportionate growth in the Latina/o population—makes this study of particular importance.

In October 2006, the United States attained a historical population record of 300 million people, thus generating an interest among scholars and the public on the dynamics of fertility. Traditionally, fertility studies have focused on the study of either current or cumulative fertilities. On the one hand, current fertility refers to whether the respondent had a child in the year prior to the survey or not. On the other hand, cumulative fertility is defined as the number of children ever born to women. However, in the end, greater benefits come not only from examining both current and cumulative

fertility but also, in the awareness that the dependent variable chosen (current vs. cumulative) will lead to different results and, thus, varying implications.

Therefore, besides differentiating between current vs. cumulative fertility, this study will try to achieve an understanding of whether the fertility behavior of racial/ethnic groups may be not only the result of the normative structure of society, but a person's definition of it. Normative structures are the ideas, values, and beliefs that rule social life. These types of structures include:

> Norms for interpersonal behavior, notions of intra-family responsibility, standards of age and gender appropriateness, principles of neighborliness and community participation, and aspirations for social mobility (Levitt 1998:933).

In the United States, a class society, social mobility is thought to be experienced by all members that strive to obtain it. This thinking is legitimized by the internalization of the meritocracy ideology. Therefore, many Americans see social mobility as achievable formally, through human capital, and informally, through the adherence to the values of the dominant culture. However, Peggy Levitt (1998) asserts that mobility and diversity may alter the normative structure of communities and thus, impact many of the practices it has established.

Levitt (1998:934) defines systems of practice as "the actions shaped by normative structures. For individuals, these include household labor, religious practices, and patterns of civil and political participation." In the case of the United States, one can see low fertility expectations as an example of a system of practices. Therefore, not only is low fertility perceived to be one of the causes of social mobility, but also one of its

consequences. Nonetheless, as a cause or as a consequence of social mobility, fertility varies across racial/ethnic groups.

III. Economic and Demographic Conditions of Racial Groups in the United States

1. Economic Status

Today, in the United States, there continues to be evidence of the unequal distribution of income, status, and power across racial groups. According to the U.S. Census 2000 Summary File 3 (SF3), when examining the household income by the race/ethnicity of the householder, whites have a median income of $45,367, with Asians having a higher median income ($51,908) and Latinos ($33,676) and Blacks ($29,423) having lower median incomes. Furthermore, when poverty rates are examined, the trends are very similar to that of median income. In 1999, 24.9 percent of the black population was below the poverty line compared to 22.6 percent of Latinos, and 8.1 percent of whites. Many scholars have developed indexes, measures, and perspectives to explain this economic disparity (Daymont 1980; Fossett et al. 1989; Hamilton 2000; McCall 2000; Ryscavage 1999). Nevertheless, studies have shown contradictory results. For example, some studies suggest that educational attainment reduces inequality (Becker 1975; Hauser and Featherman 1974, 1977). However, once race is incorporated, some scholars agree that mobility occurs in various directions and speeds across racial groups (McCall 2000; Stolzenberg and Tienda 1997). An example of this is found among African Americans and Latina/os who have not been able to achieve income parity even

with the same credentials as whites (Darity 1998; Poston 1994; Saenz 2000; Tienda 1983). Therefore, scholars like Omi and Winant (1996), Feagin (2001) and Bonilla Silva (2003) argue that racial economic inequality is a consequence of the racial foundation of the United States, which makes the driving force of mobility or lack of it not only a perpetuating ideology, but part of society's structure. In the end, not only are individual and group relations framed around race, but also their position in the hierarchical system and their opportunities for mobility. In addition, because mobility interacts with fertility, it is important for studies of the latter to understand their relationship by examining how normative structures of mobility influence and legitimize fertility behavior (Forste and Tienda 1996).

2. Demographic Stage

Intriguingly, in the study of fertility and social mobility the causality has been difficult to establish. By and large, the United States has seen a reduction in family size norms (Wood and Bean 1977). However, fertility differentials across racial/ethnic categories continue to be observed. According to the National Center for Health Statistics (NCHS) (2003), the United States has reached a total fertility rate (TFR[1]) of 2.0 placing it below its replacement level. Yet, statistics such as the TFR often mask the heterogeneity of fertility behavior, especially in a country as diverse as the United States.

Fertility differentials among racial/ethnic lines have been observed in the census since 1910 (Sorenson 1985). For example, as noted earlier, according to the NCHS in

[1] "The TFR has two advantages: it is based on recent births and thus, measures recent conditions, and it controls for age composition" (Mosher et al. 1992:202).

2001 the TFR of whites was 1.8 compared to Blacks with 2.0, American Indians 1.7, Asian Americans 1.8, and Latina/os 2.7 (see figure1). Unfortunately, the treatment of the Latina/o population as homogenous masks its great diversity and underplays its relevance for the United States. For example, even when Mexican American fertility is so important for the future demographic composition of the United States, it continues to be poorly understood (Frank and Heuveline 2005). Frank and Heuveline (2005:77) suggest that the relevance of the study of the fertility dynamics of Mexican American women is important since "previous population projections have estimated a cumulative contribution of Mexican-Origin fertility from 1980s to 2040 of around 18 million births." Recent analysis suggests that these projections may be underestimated (Jonsson and Rendall 2004; see also Frank and Heuveline 2005). Part of the problem lies in the treatment of this group as homogeneous (Bean and Stevens 2003). In a study by Aneshensel et al. (1989) when Latina/o fertility was decomposed, it was found that the Mexican-origin population has a higher fertility rate than any other group (TFR of 2.9) in the United States. Racial and ethnic differences are also found in a study using a nationally representative sample from the Youth Cohort of the National Longitudinal Survey of Labor Market Experience (Darabi and Ortiz 1987; see also Aneshensel et. al. 1989). In their work, Darabi and Ortiz (1987) found that:

> [r]ates of early childbearing were highest among blacks (41.3/1,000) and Mexican Americans (38.00), intermediate among Puerto Ricans (30.1), and lowest among (19.2)… [Moreover, the] bulk of Mexican-American and white early first births were found to be marital, while no-marital first births were more typical among Puerto Ricans and blacks (Aneshensel et al. 1989:57).

Also, while fertility differentials for many immigrant groups have disappeared with generational status, the Mexican American population continues to show higher fertility levels compared to other groups across generational status (Sorenson 1985). Because of these inter- and intra-group differences, any study that fails to decompose the group under study will create flawed macro-level theories of fertility behavior (Aneshensel et al. 1989; Bean and Tienda 1987; Bean et al. 2000; Forste and Tienda 1996; Hirschman 1994; Portes and Bach 1985; Portes and Rumbaut 1997). Nevertheless, several questions remain: what factors lead to the high fertility rates of Mexican Americans in a country where normative structures promote low fertility? How does fertility behavior differ within the Mexican American group across generational lines? To answer these questions, we next review the literature on fertility differentials.

IV. Western Literature on Majority-Minority Fertility Differentials

While attempting to establish the causes behind fertility differentials, scholars have developed several hypotheses including the cultural characteristics, social characteristics, minority status, and racial/ethnic-stratification perspective.

1. Cultural Characteristics

According to the cultural characteristics hypothesis, fertility differences between minority and majority groups are the result of cultural norms and values that support large families (Poston et al. 2005). For example, some studies of fertility have tried to untangle the factors influencing family size by examining male preference. Wood and

Bean (1977) propose that sex composition is dependent on family size norms that vary across racial groups. Consequently, to explain the higher fertility patterns of Mexican Americans compared to blacks and whites in the United States, some scholars argue in favor of the influence of the pro-natalistic culture of Mexico (Rindfuss and Sweet 1977; Frank and Heuveline 2005). Among these scholars, Frank and Heuveline (2005:77) suggest that the immigration of Mexican natives expose Mexican Americans to high fertility values that later "permeate the entire Mexican-origin community." This dynamic of social remittances[2] is often observed among Mexican-origin populations who are likely to engage in transnational movements (Carter 2000; Frank and Heuveline 2005). Many studies have argued that the geographic proximity of Mexico to the United States and the transnational nature and social remittances between the people of the two countries reinforce adherence to pro-natalistic norms which did not take place among European or Asian ethnic groups (Abma et al. 1991; Portes and Truelove 1987). Therefore, according to this theory, high fertility (current and cumulative) would continue to exist even among minority groups that have achieved high social standing.

a. Shortcomings

Even when the cultural explanation has important arguments to explain the dynamics behind current and cumulative fertility differentials, the assumptions it makes pose a challenge to its validity. First, it assumes that Mexico is a pro-natalistic culture. Evidence shows that there has been a remarkable decline in the total fertility rate of

[2] Peggy Levitt (1998:927) defines social remittances as "the ideas, behaviors, identities, and social capital that flow from receiving to sending country communities."

Mexicans. This decline began in Mexico in the 1970s when the TFR dropped to 6.8 (from a TFR in 1960 of 7.3) and continued to do so in the following decades: 4.7 in 1980, 3.3 in 1990, and 2.4 in 2000. In the end, the TFR of Mexican women (2.4) is below that of Mexican-origin women in the United States (2.9) (Frank and Heuveline 2005). The decline in Mexico's fertility is very significant not only because of its magnitude (5 children), but also because of the short period (four decades) of time that it required. Across the literature, the reduction in Mexico's TFR has been attributed to a variety of factors including: the introduction of the country's first family planning program, economic pressures from the World Bank, greater separation between church and state which together with "increases in the fertility of recent immigrants and of younger native-born Mexican-Origin women" in the United States have led to the fertility crossover between Mexican and U.S. Mexican-origin populations (Frank and Heuveline 2005:86).

The second criticism of the cultural hypothesis lies in its assumption that the normative structure and the systems of practice of the country of origin related to fertility and mobility are equally internalized by native-born Mexican Americans. In the end, norms of family formation and fertility are shared by members of some minority groups of different socioeconomic statuses (Sorenson 1985). Therefore, since ethnic identity is expected to determine fertility, only a strong and positive association between fertility and strength of "ethnic identity would lend support to a socio-cultural hypothesis" (Sorenson 1985:340). Since some immigrant women may have different fertility expectations than their Mexican national counterparts because of "selection

processes underlying decisions to migrate," they may have low fertility no matter whether they engage in migration or not (Carter 2000:1075).

Third, the cultural explanation underplays the impact of the community of destination. Kanh (1988) and Ford (1990) have found that the country of origin exerts strong influence for the behavior of immigrants. However, they only examine the contextual influence of the country of origin and do not explore the contextual impact of the country of destination (Abma et. al. 1991). For example, Goldscheider and Uhlenberg (1969) suggest that the positive relationship between Catholicism and fertility contradicts the cultural characteristics hypothesis, but note that it is yet not clear what factors interact to produce the Catholic-Non-Catholic differential. On this, Goldscheider and Uhlenberg (1969) hypothesize that:

> part of the differential may be attributed to the opposition of the church to efficient methods of contraception, and to normative encouragement of the church for large families; yet, the role of the church in the United States, and perhaps also in the Netherlands, appears to be different from other countries. More over, the higher fertility of American Catholics cannot be attributed to one specific doctrinal element (369).

Finally, the cultural hypothesis has been criticized for measuring fertility behavior resulting from cultural values as a residual (Forste and Tienda 1996). Thus, rather than truly measuring the effect of culture, this hypothesis may be including "the effects on fertility that have not been captured by the other hypotheses" (Poston et. al. 2005:10; see also Forste et. al. 1996). As a result of these shortcomings, many scholars have argued that fertility differentials are the results of social characteristics.

2. Social Characteristics

According to the social characteristics hypothesis, fertility differences between minority and majority groups are the result of differences between groups in their social characteristics (e.g., education, occupation, and income) (Poston et al. 2005). Thus, once the social and economic differences between the majority and minority groups are eliminated, so will fertility differentials disappear (Bean and Tienda 1987; McDaniel 1996; Poston et al. 2005). However, the functioning of the social characteristics hypothesis in the United States becomes very complex not only because of the diversity of racial groups, but also the heterogeneity within them (e.g., level of ethnic identity and generational status). Therefore, when discussing the social characteristics hypothesis it is essential to acknowledge the process of assimilation.

a. Assimilation

Park and Burgess (1921) developed the assimilation model, which represents the dominant perspective in the study of migration and fertility. According to Yinger (1994:39), assimilation is:

> ... a process of boundary reduction that can occur when two or more societies, ethnic groups, or small ethnic groups meet…

Gordon (1964) suggests that assimilation takes place in different stages (generational status, structural, marital, and identificational assimilation) (Bean et al. 2000). Therefore, it is once people have structurally assimilated that the progression will continue and cannot be reversed ultimately leading to the development of an "Anglo conformity" or

"melting pot" scenario (Bean et al. 2000). When examining the validity of the assimilation hypothesis, some of the factors that could be considered are income/wealth, human capital variables (education, language, labor force participation) and non-economic variables such as religion. However, we must also be aware of the criticisms made of these factors. For example, some scholars have suggested that they do not address issues of power and racism. Therefore, as we consider the effects of the assimilation indicators for fertility, we must be aware of their limitations too.

a.1 Income and Wealth

Some scholars have suggested including income and wealth in social behavior studies as they interact with fertility differently. First, in studies of inequality many statistical analysis rely on income measures, most of which are based on census data. Levy (1995) has argued that the way income is measured is not reliable. For example, income will vary based on region (McCall 2000). Ryscavage (1999) also argues that people define income in different ways (relative vs. absolute). Furthermore, by focusing on income rather than wealth, scholars have often underestimated the ability of whites to make better use of the financial system (Oliver and Shapiro 1995), therefore underestimating the role of race. Hence, scholars suggest incorporating wealth into any equation that includes income. By doing this, resources like owned properties, Medicare, insurance, bonds etc. will be incorporated into the equation.

Nonetheless, Sander (1992:478) challenges the incorporation of income or wealth of women as independent factors influencing fertility as "women's earnings are also a function of fertility." Instead, he suggests using schooling/education as a proxy for

a woman's earning ability and a possible key factor in reducing fertility by "increasing her ability to plan family size" (Sander 1992:478).

a.2 Education

In studies of fertility, education is usually included as a proxy for contraception knowledge. The assumption is that with higher levels of education, men and women are more likely to have knowledge about birth control. On the other hand, economists include education as an indicator of the "tastes" or "opportunity costs" that children represent to the woman (Wood and Bean 1977). A main assumption of this hypothesis is that the demands of women as childrearers and also as labor workers often create role conflict. Therefore, women are more likely to choose or emphasize one of them over the other. According to this hypothesis, educated women with careers are less likely to have high fertility because of "opportunity costs" associated with childbearing (Bean and Tienda 1987; Poston et al. 2005). This means that the earnings that she would make working, are greater than they are for women who have a lower education (Bean and Tienda 1987; see also Poston et. al. 2005). Therefore, the economic hypothesis assumes that fertility levels between majority and minority groups will be similar, when minority women (Latino and Black) are similar to majority (white) women in "their potential for obtaining income" (Poston et al. 2005).

a.3 Language

In the U.S. context, language has been examined in studies of the link between fertility and social mobility. These studies have focused on the effects of English proficiency and female education on fertility expectations and current and cumulative

fertility of Mexican American women. For example, Sorenson's (1985) study found that teenagers who spoke Spanish at home had higher fertility expectations (2.92 children) than those that spoke Spanish and English (2.64) and English only (2.34).

a.4 Labor Force Participation

When examining the relationship between labor force participation and fertility, studies have yielded contradictory results. Some studies suggest that a wife's childrearing responsibilities constrain her labor force activity (Smith-Lovin and Tickamyer 1982). In contrast, Cramer (1980) argues that wife's labor force activities are found to be good predictors of her expected fertility. The contradictory findings have been thought to emerge from the multicollinearity in non-recursive models, misspecification of the models, discrepancies between attitudes or intentions and behavior, and differences between static and dynamic models (Cramer 1980; Smith-Lovin and Tickamyer 1982).

a.5 Religion

Many economists emphasize the economic aspect of fertility, but there are also important non-economic factors related to fertility, such as religion (Mosher and Hendershot 1984; Sander 1992). Religion has been regarded as a key factor in understanding fertility behavior (Mosher and Hendershot 1984). In general, research has observed that religion is positively associated with fertility. This relationship has been explored emphasizing issues such as ethnicity (Sorenson 1985). Some studies have found an association between ethnicity and religious practices, which may in turn show the influence that the Catholic Church has on the fertility behavior of people (Sorenson

1985). According to Lehrer (2004), some religions provide rewards such as status or approval to couples that have many children. One of these religions is Catholicism, which not only promotes pro-natalistic values, but also forbids artificial forms of contraception and abortion (Lehrer 2004). However, one most recognize that the impact of religion on fertility is very complex. For example, not only does the religion of the mother have an impact, but also that of the spouse. If parents are from different religions, they may experience conflicting ideas with regard to fertility (Lehrer 2004). In addition, religion can also impact people's social and economic roles. For example, conservative Protestants have strong ideas concerning male and female socioeconomic roles, promoting traditional divisions of labor (Lehrer 2004). Unfortunately, some studies of fertility that include religion have been criticized for not taking into account socioeconomic backgrounds and adjustment for religious denomination (Sander 1992). The reason for this is that religious affiliation and behavior differ among racial and ethnic groups and across social classes.

Furthermore, beyond the economic aspects of religion, it has also been suggested that religion may influence fertility behavior as a "psychic cost." For example, women may decide not to use contraception methods due to the Catholic Church's challenges to their use beyond the natural method (Sander 1992). Evidence of this can be observed in a study that found differences within a Latina/o group with Mexican American teenagers having a greater likelihood of resolving a pregnancy with a live birth rather than abortion (Aneshensel et. al. 1989). Nevertheless, Sander's study (1992:478) has challenged the religion-fertility relationship and shows that "religious activity has no effect on fertility"

and that in the end, the "positive effect of Catholicism on fertility is inflated, when current religious status is used as a measure" (Sander 1992:489). The reason for this inflation may lie in that Catholics who want smaller families leave the church, and respondents with a high preference for children, join it (Sander 1992).

In the end, the assimilation hypothesis when applied to fertility studies assumes that the sources of immigrant-native fertility convergence are located in the process that occurs after migration takes place and acknowledges the influence that the country of origin has on the fertility patterns of migrants. Therefore, even when the fertility expectations of the country of origin may be high and, thus, produce a high initial fertility expectation among immigrants, with time in the United States fertility expectations will change. Thus, the hypothesis suggested by Frank and Heuveline (2005) assumes that with time in the United States., immigrants go through a process of gradual acculturation, which increases with each generation. With time, as immigrants and their offspring are exposed to the norms and values of the host society, they may internalize the normative structure promoted by the majority group which leads to the decline of fertility differentials (Bean et al. 1982; Kanh 1994). However, culture is not the only factor involved in this process. Bean and Tienda (1987:211) suggest that once this process of assimilation begins, what brings about "convergence of minority/majority fertility levels is the structure of socioeconomic rewards in the society and the degree to which these are available to the members" of the minority group (see also Poston et al. 2005).

In addition, the assimilation hypothesis assumes that changes in fertility norms and values take place quickly with the effects of these changes often apparent in the fertility of the immigrant generation. As applied to Mexican immigrants, this hypothesis predicts that the fertility of immigrants will approach that of the native-born women within a few years after the move, other things being equal. Differences then, between majority and minority fertility are treated as temporary phenomena that will disappear with assimilation (Goldscheider and Uhlenberg 1969). Thus, even when the immigrant's culture poses a great positive effect on their fertility, this effect will weaken the longer the immigrant has been in the United States (Chiswick 1978; Ford 1990; Frank and Heuveline 2005; Gordon 1964; Kanh 1988; Rindfuss 1976).

However, it has been suggested that the socioeconomic status of the minority group tests the validity of the social characteristics hypothesis (Poston et al. 2005). On the one hand, the strong form suggests that once socioeconomic controls have been introduced, race will not have an effect in the cumulative fertility of women at any educational level (Johnson 1979). On the other hand, in its weaker form, the above hypothesis would only be valid among groups that have achieved a successful socioeconomic status, since the process of assimilation is assumed to occur more slowly "among the more disadvantaged minority groups" (Bean and Tienda 1987:212). Hence, Johnson's (1979) study reinforces the thesis that structural assimilation among a minority group precedes the disappearance of minority-majority differentials in fertility.

b. Shortcomings

Nonetheless, even when studies have shown that socioeconomic factors are influential for fertility behavior of minority groups; scholars have also recognized their limitations. First, the assimilation perspective is never clear on how long the assimilation process will take. In addition, the treatment of assimilation as a process of boundary reduction between majority and minority groups has been criticized by some scholars. For example, Portes and Zhou (1993) argue that the process is not as linear as it once was, and that there are many factors that need to be taken into account when looking at assimilation. In some cases, the opportunities available to higher-order generations to achieve structural assimilation have decreased, preventing the mobility of some groups (Farley 1996; see also Bean et al. 2000). In addition, McDaniel (1996) notes that the level or ability of a group to be assimilated will also depend on whether the group is viewed as a racial or ethnic group. According to McDaniel (1996:139), "racial assimilation implies that different ethnic groups assimilate into particular races and ethnic assimilation occurs among groups considered ethnically different." For example, racial assimilation takes place when the phenotypical differences of a particular group are surpassed by what are considered cultural and historical connections. When this occurs, the role that ethnicity plays in the decision making of the group (e.g. fertility behavior) may be heightened (Bean et. al. 2000). If this occurs, two scenarios may emerge: ethnic resilience or segmented assimilation. On the one hand, ethnic resilience refers to the "reemergence and strengthening of ethnic consciousness" as individuals become aware that full incorporation or integration is challenged by the obstacles that

remain (Bean et. al. 2000:417; see also Portes and Bach 1985). As to why we should observe evidence of ethnic resilience among Mexican Americans in the late 1980s but not in earlier periods, we may argue that the answer lies on the one hand, on the increased consciousness among this specific population and on the other, in the Mexican immigration and Mexican-origin population growth since 1970 (Bean et al. 2000).

On the other hand, Portes and Zhou (1993) and Waters (2001) suggest that sometimes the development of unequal barriers creates a process of assimilation that takes place in segmented or staged ways. First, the segmented assimilation perspective recognizes people's agency to decide whether or not to give up their cultural heritage and internalize the normative structure of the host country. Second, Portes and Zhou (1993) argue that assimilation does not increase with generational status in a linear way. In fact, they suggest that with time, different generations assimilate into different sectors of American society creating conflict and tensions across generations (Portes and Zhou 1993). Therefore, the question becomes what makes some groups assimilate into a particular group?

Portes and Zhou (1993) propose that the social and structural context influences the modes of incorporation. The social and structural contexts include variables such a person's phenotype, location, and absence of mobility ladders (Portes and Zhou 1993:83). For example, the darker a person's skin is, the harder it will be for her/him to be accepted and assimilated into the white culture (majority). At the same time, the location where people establish will influence their integration. Since the majority of immigrants live in central cities (inner cities), they come into contact with minorities

(mostly blacks); because of this, the majority group identifies all minority groups (e.g. Latino and Black) as homogenous (Portes and Zhou 1993). Due to all of these factors, some second-generation immigrant groups may become aware that assimilation into the mainstream society does not always guarantee the social mobility dreamed off by their parents. In this case, there are two possible alternatives. On the one hand, many second-generation immigrants assimilate into subcultures, which are also looked down upon by the majority. On the other hand, many ethnic communities continue to hold on to their culture, since it is the only way they perceive that they can increase their chances for educational and economic mobility (Portes and Zhou 1993). It is by having this closer look at immigrants' experiences that we may begin to understand the reasons behind the segmented and irregular integration that racial/ethnic experience (Portes and Zhou 1993).

Finally, the assimilation theory is unable to explain high fertility differentials among people who are third- or higher-order generation—e.g., Mexican Americans compared to first-generation Mexican-origin immigrants or among minority groups who do not have a recent history of immigration (e.g., Blacks) (Forste and Tienda 1996). For example, using data from the 1960 census, Uhlenberg (1973) observed very little drop-off in completed family size among higher-generation Mexican-origin women after controlling for age, education, marital status, and employment. Furthermore, there are also mixed explanations in which both ethnicity and socioeconomic status are found to have an impact on fertility (Goldscheider and Uhlenberg 1969; Sorenson 1985). Goldscheider and Uhlenberg (1969) found that minority-group members at higher

socioeconomic levels tend to have a lower fertility compared to majority-group members as a strategy to achieve or maintain high status (see also Sorenson 1985). Forste et al. (1996) also mention that in some cases, low fertility does not occur even after a lengthy time period in the United States. Therefore, socioeconomic factors may not be the only reason behind fertility differentials.

3. Minority Status

Many scholars have recognized that fertility differentials across racial groups have persisted, even after control variables have been accounted for statistically (Bean and Swicegood 1985; Goldscheider and Uhlenberg 1969). As such, Goldscheider and Uhlenberg (1969) argue that there are other factors beyond social and economic conditions that explain differential fertility levels between majority and minority groups. Supporters of the minority status perspective suggest that race has an independent effect on fertility beyond socioeconomic characteristics (Aneshensel et al. 1989). Carter (2000:1076) suggests that minority group status is thought to create feelings of "marginality and insecurity among its members" ultimately causing fertility differentials that will vary depending on the socioeconomic standing of the group (Bean and Swicegood 1985; McDaniel 1996; Poston et al. 2005). Illustratively, one way in which race may operate is through the structural disadvantages that racial/ethnic minority groups experience in their attempt to achieve social mobility (Johnson 1979).

a. Two Scenarios of the Minority Status Hypothesis

According to the minority status hypothesis, fertility differentials between majority and minority groups will exist at every socioeconomic level. On the one hand, it has been suggested that in one of the scenarios two fertility outcomes can occur--one in which there is higher fertility among minorities compared to whites when the education of minorities is low, and on the other, lower fertility for minorities compared to whites when the education of the former is higher (Johnson 1979). Research on fertility, minority status, and social mobility suggests that the marginality and insecurities of minority group members will induce them to lower their fertility as they attempt to maintain their resources and achieve social stability (Carter 2000; McDaniel 1996; Kasarda et al. 1986). These feelings are mostly experienced among people who have higher aspirations for mobility, and hence, are more sensitive to the challenges brought about through discrimination (Poston et al. 2005). For example, Goldscheider and Uhlenberg (1969) found that when different socioeconomic controls are used, Blacks, Jews, and Japanese do not have the same fertility as whites, but in fact lower. Furthermore, it is also assumed that in some cases minority fertility may drop even below majority standards when there is no pro-natalistic ideology "associated with the minority group and no norm discouraging the use of effective contraceptives" (Goldscheider and Uhlenberg 1969:372; see also Johnson 1979; Lee and Lee 1959). For example, a study of an urban black majority sample found that blacks with at least four years of high school have lower fertility than whites (Goldscheider and Uhlenberg 1969). In addition, the literature on minority status offers an alternative possibility.

The alternative scenario of the minority status hypothesis assumes that when minority group members reject the mainstream values and adopt and embrace their own culture, they will no longer be influenced by the majority fertility standard (McDaniel 1996; see also Carter 2000). Hence, it has been argued that among low SES minority status groups who have experienced discrimination, higher fertility than the rest of the population will occur (Poston et al. 2005).

In addition to socioeconomic status and feelings of marginality among members, a crucial factor in the minority group-fertility relationship is the desire of the group to acculturate, which may not be a synonym of assimilation (Goldscheider and Uhlenberg 1969). Consequently, when minority groups do not intend to acculturate into the majority group or society, they will attempt to become legitimized by maintaining strength in numbers, thus encouraging high fertility in spite of any obstacles that challenge it (Goldscheider and Uhlenberg 1969). Abma et al. (1991:146) mention that "the normative system within the minority group and the degree of an individual's integration within the minority group are both significant for minority outcomes" (Goldscheider and Uhlenberg 1969). It is then suggested that there will be greater fertility deviations the less integrated minority groups are (Marcum and Bean 1976). Eventually, the findings that social mobility significantly shapes fertility behavior, as seen in completed family sizes among Mexican American women, provides evidence that minority group identification may be a factor influencing fertility behavior (Marcum and Bean 1976). Therefore, even when the socioeconomic characteristics of both

majority and minority groups may achieve parity, fertility behavior will always be different if one of the groups has faced a higher level of discrimination (Johnson 1979).

b. Shortcomings

Even though the minority group status hypothesis has received a significant amount of empirical support, it has various shortcomings. First, the minority group status hypothesis tends to treat minority groups as homogenous in terms of social and economic standing. However, Forste et al. (1996) mentions that the low fertility of Asian women challenges this assumption as some minority groups are advantageous educationally and others, especially those that are refugees, have a low socioeconomic status. For example, among Asians, Vietnamese have the highest cumulative fertility while Chinese and Japanese women have the lowest (Barringer et al. 1993).

Second, the minority status hypothesis assumes that minority group members want to originally assimilate into the majority group. It is possible, however, that in trying to achieve socioeconomic mobility, many couples choose to have low fertility as a way to compensate for the disadvantages they encounter (Marcum and Bean 1976). For example, because in many cases upward mobility does not completely occur, people may find themselves in marginal positions that create feelings of insecurity and thus encourage a decrease in fertility to preserve their socioeconomic position (Marcum and Bean 1976). The same would be hypothesized for couples that experience downward mobility since they expect to offset socioeconomic losses by reducing their fertility (Marcum and Bean 1976).

Third, there is little discussion on how social status is defined among and within minority groups. For example, in terms of mobility, differences in the way groups evaluate social standing may exist across generational statuses (Marcum and Bean 1976). On the one hand, since first-generation immigrants may have close ties to their country of origin, they may evaluate their current social condition by comparing it to the one they had or would have in their country of origin. Thus, if their evaluation is positive, any feelings of insecurity that are assumed to come with the marginal position occupied by the member of a minority group may be alleviated (Marcum and Bean 1976). It is until the family has been in the United States for a long time that their group of reference may become whites. At this point (two to three generations later) with the aspiration to be assimilated and experiencing little mobility, they may become aware of their marginality, thus, ultimately lowering their fertility (Marcum and Bean 1976). Similar processes could also occur among first-generation immigrants. In their case, to be able to consolidate the little stability they have been able to achieve, compared to the Mexican reference group, they may lower their fertility. For the second generations, however, since they have seen some benefits and thus, do not feel the pressure to postpone or limit childbearing, people may well show some increase in fertility (Marcum and Bean 1976). Therefore, it could be expected that the dynamics of mobility and fertility behavior will be more fluid across generational groups than the minority status hypothesis assumes as reference groups switch with the passage of time. Because of these shortcomings, the validity of the minority status hypothesis has been questioned.

In the end, some scholars have challenged what have been labeled as *first-generation* hypotheses of fertility which include cultural, social characteristics, and minority status hypotheses for not giving a concrete answer to many questions some of which include: how does belonging to a particular race influence fertility? How or why does race impact fertility behavior? Whether or how social contexts (family, church, neighborhoods, and peers) influence fertility?" (Forste and Tienda 1996). Therefore, McDaniel (1996) and Frank and Heuveline (2005) suggest adopting a racial/ethnic stratification perspective to study fertility.

4. Racial/Ethnic Stratification

Studies of fertility have paid very little attention to racial fertility differences (McDaniel 1996). Most studies that have examined fertility differentials have attributed the residual racial effect to culture (Forste and Tienda 1996). Frank and Heuveline (2005) question the validity of the cultural hypothesis and thus, suggest that instead of emphasizing the cultural influence of the country of origin, the influence of the social context (structure) of the United States, as it relates to fertility, be examined by adopting a racial framework.

The racial stratification perspective begins from the premise that race is a social construction (McDaniel 1996). This means that people have arbitrarily chosen a set of physical or social characteristics to group and separate one another. It is by adopting a racial framework, rather than observing the social consequences of racial differences (essentialism), that social relations are analyzed (McDaniel 1996). In addition, because

many scholars agree that a society distinguished by racial differences will usually be stratified and show signs of ethnocentric and intolerant behavior, the racial/ethnic stratification perspective encourages and values diversity rather than assimilation (Cox 1948; McDaniel 1995, 1996).

Contrary to the minority status hypothesis, the racial stratification perspective acknowledges differences among a diverse population by separating differences that are cultural from the ones that create inequality (McDaniel 1996). Thus, by deconstructing majority and minority groups, the racial/ethnic stratification perspective does not only view differences as strengths, but it also recognizes the dynamic and relative positioning of values in society (McDaniel 1996). For example, today, in the United States the European white group occupies a position of authority and domination, becoming the standard by which members of society are measured (McDaniel 1996). Hence, the racial/ethnic stratification perspective would explain the status and behavior of minority groups as the result of how similar or different—thus how acceptable--they are from the majority group (white). Furthermore, because the responses of a cultural group to socioeconomic conditions may be influenced by their culture and historical condition, we should not be surprised to see racial/ethnic groups responding differently (McDaniel 1996). For example, among minority women fertility decisions may be influenced by what they perceive to be their opportunities. Thus, an oppressive racial context may be redefined by minorities as the opportunity to empower themselves and redefine the normative structure and thus, their "obligation and expectations" (fertility behavior) (McDaniel 1996). For example, according to Frank and Heuveline's (2005) study,

Mexican Americans marry at younger ages not because of cultural ideals promoting marriage, but differences in their family socioeconomic background and "timing of life course transitions, such as educational attainment, school enrollment and employment" (99). Therefore, when trying to explain demographic variables with a cultural explanation, it is important to conduct a deeper analysis throughout the person's life course and include measures of structure (Frank and Heuveline 2005).

Furthermore, Abma et al.'s (1991) study challenges socio-cultural explanations and instead finds support for the effect that the local context has on the high fertility of Mexican Americans. In their study they find that the structural economic context provides either a supporting environment for pro-natalism or against it (Abma et al. 1991; Lopez and Sabagh 1980). The explanation for such differences is difficult to untangle, but scholars agree that this behavior occurs in a context of differences not only in social mobility, but also of socioeconomic attainment that encourages individuals to challenge or redefine the normative structure (Frank and Heuveline 2005). To understand how racial/ethnic groups internalize or challenge the normative structure as it relates to fertility behavior, we can look at the wealth flows model.

In 1982, Caldwell proposed a theory of intergenerational wealth flow to explain fertility differentials. In his model, he proposes there are only two types of fertility regimes, one in which there is not an economic gain from restricting fertility (traditional), and one where there is (modern) (Caldwell 1982). He adds that in both cases, not only is fertility rational but economically rational and thus, leads to high fertility or childless societies. In traditional societies, an investment is made in children

so that they will assist parents by providing a positive net flow of resources, services, and status-honor. Thus, in stable high-fertility societies, there is always an incentive for additional children. However, Caldwell suggests that with time, societies go through a period of transition ultimately reaching modernization (1982).

According to Caldwell (1982), transition refers to rapid changes in the way of life that influence not only the impact of children but also the individual's fertility behavior. When this occurs, societies move to a level of modernization where there is a reversal of the wealth flow. In this stage, parents contribute wealth, time, money, services, and support to children with minimal expectations of any return. Hence, according to Caldwell (1982) there are few economic incentives for high fertility in modern time. Caldwell (1982) suggests that the transition between high fertility societies to childless ones is the result of social, rather than economic, change even when a particular type of fertility is strengthened by economic modernization and thus, has economic implications. Therefore, it is possible to argue that the higher fertility of Mexican Americans may be a different response to socioeconomic status that in the end is the result of a redefinition of the normative structure.

Because each racial group has a unique history, social differences related to racial differences eventually may allow us to understand fertility differentials across racial groups. Therefore, McDaniel (1996) suggests that researchers stop ignoring the use of the racial stratification perspective in the study of fertility differentials.

As shown from the previous section, not only does each racial/ethnic group have a unique demographic and economic history, but there are different perspectives that

attempt to explain how racial/ethnic groups come to accept or challenge normative structures by redefining fertility expectations. Therefore, drawing from different bodies of literature, the present study asks whether the normative structure and systems of practice of the United States, as they relate to fertility behavior, are redefined along racial/ethnic lines. In particular, the following sets of substantive questions are examined.

- Is the fertility behavior of Mexican American women in the United States influenced by their socioeconomic standing?
- Is generational status significant for the cumulative fertility of Mexican American women?
- Are there any fertility differentials between Mexican-origin and white women after controlling for socioeconomic status?
- How do fertility behaviors differ along racial/ethnic lines?

In particular, the following set of hypotheses will be tested.

- High socioeconomic status Mexican American women have more children ever born to them than low socioeconomic status Mexican American women.
- Mexican American women with higher generational status scores will have a lower cumulative fertility than women with lower generation status scores.
- Mexican American women have a higher current fertility than whites after controlling for socioeconomic status.
- Mexican American women have a higher cumulative fertility than whites after controlling for socioeconomic status.

CHAPTER III

METHODOLOGY

The fertility research questions and hypotheses proposed in the previous chapter will be addressed through a quantitative analysis using data from the National Longitudinal Survey. In this section, I compare the National Longitudinal Survey to extant datasets related to fertility on the basis of their strengths and weaknesses concerning my research questions. Subsequently, I describe my sample and the methodology developed which includes a set of logistic, zero inflated Poisson, and zero inflated negative binomial regressions to test my hypotheses. Finally, I describe the dependent and independent indicators used in my analysis.

I. Datasets

Several datasets have commonly been used in the literature to examine fertility differentials across racial/ethnic groups. Some of these datasets include the U.S. census, the Mexican Migration Project (MMP), the National Survey of Family Growth (NSFG), and the National Longitudinal Survey (NLS). In this section, I discuss the strengths and weaknesses of each dataset as they relate to my research questions.

1. U.S. Census

The U.S. census has traditionally been one of the most important sources of data for demographic studies. Although the primary objective of the decennial census is to collect data to apportion political representation, researchers use it to understand demographic and socioeconomic trends in the population. Over the last several decades, as the population has become increasingly diverse along racial and ethnic lines, census data have become an increasingly important source of data to examine variations in the demography and socioeconomic status of racial and ethnic groups.

However, the census, as a source of data for analysis related to fertility, has several limitations. First, beginning with the 1990 census, fertility information has not been collected in the census. This omission is a critical shortcoming related to my research questions. Second, even fertility data collected in earlier censuses as well as fertility data that are collected periodically in the Current Population Survey (CPS) do not allow me to adequately address my research questions which are interested in the links between stage in the life course and fertility behavior. Indeed, the cross-sectionality of the census challenges a longitudinal appreciation of fertility dynamics. Third, the census has changed its racial/ethnic categories—particularly in the case of Latinos—which prevents a stable interpretation of the behavioral and structural changes of racial/ethnic groups. Finally, census data contain only information on nativity status (country of birth), thus not allowing comparisons across generation groups, although CPS data do allow such comparisons. In the end, the U.S. census is not the best source of data for my analysis.

2. Mexican Migration Project

The Mexican Migration Project (MMP) is a collaborative project between Princeton University and the University of Guadalajara. The MMP's sample comes from a variety of communities that provide a wide range of demographic, economic, and social information. In particular, the sample communities come from the states of Colima, Guanajuato, Guerrero, Jalisco, Michoacán, Nayarit, San Luis Potosí, Zacatecas, Puebla, Oaxaca, Sinaloa, Baja California Norte and Aguascalientes (MMP Website).

The MMP applies the questionnaires in three phases. The first phase involves the collection of social and demographic data for all the members of the household as well as the identification of people with migration experience in either the United States or Mexico. Information is then recorded on the migration experiences of these members such as the number of total trips to the United States, U.S. occupation, and wages (MMP Website). The second phase gathers life histories for all household heads including information related to fertility, labor force participation, housing histories etc. (MMP Website). The final phase compiles information on the migrants' experiences. Finally, the results of the surveys administered by the MMP database yield a set of five primary files each corresponding to a different unit of analysis.

Overall, the MMP has several strengths. First, it contains information gathered since 1982 from surveys conducted every year in Mexico and the United States, which lends itself to longitudinal analysis. Second, the study employs an *ethnosurvey* approach that combines techniques of ethnographic fieldwork and representative survey sampling (semi-structured format) to gather both qualitative and quantitative data. Having both

types of data provides high quality data for any research. In fact, "this method was designed to provide a picture of Mexican-U.S. migration that is historically grounded, ethnographically interpretable, quantitatively accurate, and rooted in receiving as well as sending areas" (MMP Website). Third, the information gathered during the interviews and the surveys is crosschecked with local informants to ensure its validity. Finally, the MMP database contains information at different levels of analysis, which permits flexibility in the type of study conducted.

Understandably, however, the MMP has some weaknesses. First and most important, it lacks information on other racial/ethnic groups beyond Mexicans and Mexican Americans. One of the main criticisms of the fertility literature has been its emphasis on studying the fertility of Latina/os, neglecting whites and African Americans, while treating all Latina/o subgroups as homogenous (Forste and Tienda 1996). Second, while the MMP allows for the study of cumulative fertility, it lacks information on birth histories as well as on fertility expectations and how they change through time. Thus, I am unable to study the dynamic nature of fertility behavior using the MMP dataset even if I concentrated solely on the Mexican population. In sum, even though the MMP is an excellent source of information on the Mexican and Mexican American populations for many purposes, it has some significant shortcomings related to fertility research.

3. National Survey of Family Growth

The National Survey of Family Growth (NSFG) is a survey that overcomes the shortcomings of other datasets related to fertility. This survey has been conducted by the National Center for Health Statistics (NCHS) in 1973, 1976, 1988, 1995, and 2002. The data are based on individual interviews of a national sample of women ages 15-44 (NSFG). Despite its wealth of information on fertility, the NSFG is limited to information on nativity status. As such, it does not allow for an examination of fertility across generational status groups. Second, the survey lacks important information needed to test some of the hypotheses of this dissertation. For example, the NSFG does not contain information on the different dimensions of assimilation involved in the research questions. Third, the data provided by the NSFG prevents the longitudinal analysis of fertility behavior needed to test the assimilation model as well as its interaction with social mobility, generational status, and race.

4. National Longitudinal Survey

Because of the shortcomings of the previous sources in addressing the research questions driving this dissertation, the National Longitudinal Survey (NLS) is used to examine the hypotheses presented in the previous section. The NLS is a set of surveys primarily funded by the Bureau of Labor Statistics (BLS) and the U.S. Department of Labor. The surveys contain longitudinal information on the life experiences especially, labor market ones of women and men. In particular, the data used in this study come from the National Longitudinal Survey of Youth 1979 (NLSY79). The NLSY79 was

initiated to replicate the analysis of the 1960s young women and young men cohorts and to evaluate employment and training programs for youth.

After comparing and contrasting the previous datasets, the NLSY79 was found to be the best choice for several reasons. First, as mentioned in the previous chapter, fertility studies of racial/ethnic groups treat most Latina/o populations as homogenous, underplaying intra-group differences and emphasizing non-Latina/o-Latina/o comparisons (Forste and Tienda 1996). The NLS79 has information on several racial and ethnic groups (including persons of Mexican origin) enriching the current state of the fertility literature. Second, most studies on fertility have been conducted using cross-sectional data because of the lack of complete birth histories which impedes the complete understanding of fertility behavior (Carter 2000). Fortunately, the longitudinal nature of the NLS79 allows for the examination of current and cumulative fertility behavior throughout women's life course since the data for this sample has been collected yearly from 1979 to 1994, and biennially from 1996 to the present. Hence, data from the NLS79 can be used to examine not only interracial fertility differences, but also the strength of the relationships between independent and dependent variables through time. Therefore, the longitudinal nature of the NLS79 data reflecting complete birth histories allows researchers "to track the parity-specific birth behavior of women and helps elucidate the age, period, or cohort effects influencing their fertility" (Frank and Heuveline 2005:94).

Furthermore, not only does the NLSY79 have detailed information on the nativity status and characteristics of respondents, but also information on their parents

and grandfathers. This generational status information makes it possible to distinguish individuals within and across racial/ethnic groups beyond simple nativity status to an expanded generational status classification. In particular, this information allows for the computation of generational status scores needed to test research questions associated with the relationship between fertility and the reemergence and strengthening of ethnic consciousness from the ethnic resilience perspective. The data can also be used to permit comparisons of birth rates by generational levels to test different perspectives (cultural, social characteristics, minority status, and racial stratification) (Carter 2000). Finally, the survey provides information on labor force participation, education, income, wealth and other important factors that the literature has shown to influence the current or cumulative fertility behavior of women. Therefore, because of its richness of information, I have chosen the NLSY79 to carry out the study of the association among fertility behavior, generational status, and social mobility across racial/ethnic groups in the United States.

II. Sample

My national probability sample is composed of native- and foreign-born Mexican American and white women living in the United States who were 14 to 22 years old when they were first surveyed in 1979. This sample enriches the understanding of fertility in several ways. First, by including women of different groups, we test race/ethnicity as an indicator of socioeconomic status, education, religion, etc. as suggested by the racial stratification perspective. In addition, the fact that the analysis

begins with young women ages 14 to 22 allows us to distinguish cultural and structural factors involved in fertility behavior "before these measures become biased by the inclusion of children already born or modified by the perceived desires or expectations of a spouse" (Sorenson 1985:341). A young sample in 1979 also helps recognize the moments in which cultural and structural factors begin to exert an influence on fertility (Sorenson 1985).

As with any research, there is concern regarding the validity of the sample size. Indeed, statistical significance is influenced by sample size (Clark and Carter 1997). Therefore, a small sample size may lead to non-significant results and thus, the rejection of the null hypothesis of no effect when in fact the hypothesis is supported (i.e., a Type II error) (Clark and Carter 1997). In this study, the number of Mexican American and white women in my sample needs to be large enough so that the relationships between my independent and dependent variables have the potential of being statistically significant. Thus, it was necessary to determine the necessary sample size that would give my study statistical power which is defined as "the probability of avoiding a Type II error" (Clark and Carter 1997:195).

According to Clark and Carter (1997:195), for multiple regression with a medium effect size (d=0.5) and an α-level of 0.05, to achieve power of 0.95, 400 participants are necessary. Unfortunately, even when the NLSY79 has respondents of different generational statuses (e.g. 1^{st}, 2^{nd}, and 3^{rd} generations), each of the samples were not large enough (<400) to have statistical power. Thus, instead of using a stratified sample based on generational status, I have included an ordinal generational status score.

As a result, my racial/ethnic samples consist of 447 Mexican American and 2,727 white women.

In addition, to overcome the limitations of previous studies, I conduct several regressions to examine fertility behavior through time. To do this, I focus on the responses of women in 1979, 1990, and 2000. The reason for the examination of each of the mentioned years is the recognition of the different life course stages that may influence fertility behavior. For example,

> …women from the younger cohort are typically at the beginning stages of establishing family and work roles, whereas the processes of family and career building are more fully underway for the older cohort. As a result, limitations in labor market opportunities may have a stronger influence on fertility among the younger cohort of women because they are just attempting to create attachments to the labor market (Abma et al. 1991:153).

The longitudinal nature of this method helps understand the complexity of the fertility behavior of women and thus, improves previous cross-sectional studies (Frank 2005).

III. Variables

One of the main concerns in the process of this analysis has been the operationalization of the variables used to examine the relationships between fertility, generational status, and mobility of Mexican-origin women in the United States relative to those of white women. The analysis incorporates numerous variables deemed important—based on the literature—into the analysis (see Appendix 1). Because

reference categories vary through time and across samples, I will note which indicators are the reference category in the description of the racial/ethnic groups.

1. Dependent Variables

In the study of fertility, scholars have to be careful in distinguishing between current and cumulative fertility since the dependent variable chosen will have different implications. In particular, the benefit in examining current and cumulative fertility is the recognition of fertility behavior as a complex and dynamic process.

In this study, current fertility is defined as whether the respondent had a child in the year prior to the survey (1= Yes; 0= Otherwise/No). Cho et al. (1970) argue that it is important to look at current fertility since fertility differentials can dramatically change within short time periods.

On the other hand, cumulative fertility is defined as the number of children ever born to the respondent. For the most part, when one examines cumulative fertility, immigrants have a higher fertility than native-born women probably due to the postponement of childbearing among the latter (Ford 1990). In addition, this longitudinal analysis acknowledges that the process influencing people's decision to have a first and second birth are different from those that guide higher-order births because of the normative structure of the United States which discourages childlessness and encourages motherhood (Abma et al. 1991).

2. Independent Variables

In addition, I have included in the analysis a set of independent variables that influence fertility behavior. Since the analysis includes the examination of three different samples at three different points in time, the reference categories change. Therefore, the reference category for each indicator will be noted in section IV.

a. Generational Status Score

Traditionally, in the United States generational status has been divided as follows. People considered to be first generation are those that were born in a foreign country. This category is further divided into those that migrated as children (13 younger)—the 1.5 generation—(Hirschman 1994) and those who migrated at a later age. Second generation status comprises individuals born in the United States (or abroad to American parents) who have at least one parent who was born abroad. The third generation includes individuals who were born in the United States (or abroad to American parents) who have both parents who were born in the United States. Unfortunately, because the sample size for each generational status is relatively small and the power tests indicated a minimum sample size of 400 is necessary for the statistical power I want to achieve, I was unable to include the traditional categories in my models.

Therefore, to overcome this shortcoming, I decided to use the generational status score—an interval-level measure--suggested by Richardson and Resendiz (2006). In this variable, respondents are assigned points on the basis of U.S. birth among themselves,

their parents, and their grandparents. Thus, if a respondent was born in the United States, she/he is assigned a value of 4 (0 for those born in Mexico). Additionally, the respondent is assigned a value of 2 for each parent born in the United States. Subsequently, if the grandparent was born in the United States, a value of 1 is assigned; a value of 0 is given for those whose grandparent was born abroad. Finally, all the values are added to have a generational status score from 0 (all foreign-born) to 9 (all U.S.-born).

b. Socioeconomic Variables

In addition, I have included a set of socioeconomic variables as predictors of fertility. Frank and Heuveline (2005) suggest controlling for education, labor force participation, language, wealth, and income, all of which the literature associates with fertility.

b.1 Education

As mentioned previously, there is an agreement in the sociological literature that when fertility is examined, education is one of the most influential human capital variables (Becker and Chiswick 1966, Becker 1975; see also Poston 1994). In studies of fertility, education is usually included as a proxy for contraception knowledge. The assumption is that with higher education, men and women are more likely to have information about birth control. Therefore, in this analysis education is included as an interval variable measured by the years of schooling completed. Research has shown that the greater the educational achievement, the lower the fertility.

b.2 Occupation

Another important issue to consider is the occupational profile of the Mexican American and white (native- and foreign-born) populations. Therefore, I combined several occupations into four categories that are dichotomous and which are professional, sales/services, craft, and no work (for each dummy variable, respondents receive a “1” if they are working in that particular broad occupation and “0” otherwise) (Table 1).

b.3 Language

Language has also been shown to play an important role for social mobility, especially concerning foreign-born persons. According to the human capital perspective, immigrants invest in learning English so that they can obtain higher rewards from the labor market (Saenz 2000). Empirical evidence shows that workers who are proficient in English tend to have higher wages than their peers who speak only their native language; one of the reasons may be the ease that it provides in the acculturation process (Bean et al. 1984; Saenz 2000; Stolzenberg and Tienda 1997; Poston 1994). What is interesting is that language is not only an assimilation variable, but also a human capital one.

According to the human capital theory, language proficiency is a very relevant factor of communication which is "a vital aspect of any job, whether the worker must speak to other employees, customers or even learn to deal with machinery" (Tainer 1986:3). Furthermore, besides being a measure of exposure to the normative structure, language is recognized as “playing an important role in the conscious effort to retain

aspects of an ethnic cultural heritage" (Sorenson 1985:349; see also Greeley 1977). The use of Spanish at home or with friends may be associated with adherence to the values of the Mexican American culture, which in turn would result in larger expected family sizes (Sorenson 1985:349). Thus, I include language in my models as a set of dichotomous variables that measure which language was spoken at home when the respondent was growing up. The three categories are Spanish, English, or other foreign language (1= Yes; 0=Otherwise).

b.4 Income and Wealth

Income and wealth are two variables that have been found to be influential for fertility and social mobility. For this study, income is defined as the sum of the respondent's and her partner's (spouse's) real income. The real income has been calculated to be able to make comparisons through time. It should be noted that women's earnings may be affected by their fertility level (Sander 1992).

Furthermore, because research has also suggested that wealth is an important factor related to social mobility, it is also included in the analysis. Unfortunately, even when there is broader information in the dataset to capture all dimensions of wealth (e.g., income from rental property, net worth, savings, etc.), the information is not available for the three years I am examining (e.g. 1979, 1990, and 2000). Therefore, wealth is defined as whether the respondent or her partner (spouse) own or pay mortgage on their house (1=Yes; 0= Otherwise).

c. Control Variables

A group of other variables related to fertility are also included in the model as controls. These include age, marital status, and religion.

c.1 Marital Status

Marital status has been found to have an impact on fertility (Bongaarts 1978; Kanh 1994). In his study, Bongaarts (1982) identifies that four intermediate factors—referred to as "proximate determinants" —-one of which is being married are the most important determinants of fertility and explain 96 percent of the variance in the TFR in a sample of 41 populations in developing and historical populations. In particular, because married women are in more stable relationships, they tend to have better defined plans regarding future fertility (Kanh 1994). Marital status is measured in this analysis by three dichotomous categories: married, divorce/separated/widowed, and never married (1=Yes; 0=Otherwise).

c.2 Religion and Religiosity

Scholars have for long been interested in the link between religion and fertility (Mosher et al. 1992). Some researchers have suggested that religious activity "might be correlated with unobservable factors that are endogenous with fertility" or that represent a consequence of fertility (Sander 1992:478). Therefore, I include several religion variables that are dichotomous and which include Protestant, no religion, Catholic, and other religion (1=Yes; 0=Otherwise).

In addition, a variable that measures religiosity is included as religious affiliation may not be related to individuals actually following religious norms. For example,

Mosher and Hendershot's (1984) study finds that wives that are Catholic and received communion at least once a month had more births compared to others (see also Sander 1992). Therefore, I also include a set of dichotomous variables to measure religiosity as the frequency of attendance at religious services. These variables include infrequently/not at all, less than 2 times per month, once per week, and more than once per week (1=Yes; 0=Otherwise).

d. Race/Ethnicity

Furthermore, it is necessary to acknowledge the relationship between fertility and race/ethnicity. For example, Sorenson (1985) mentions that the pro-natalistic teachings of the Catholic Church have a major influence on birth control and the fertility behavior of Latina/os. In addition, a study conducted by Namerow and Jones (1982**)** finds that Latina/os have the longest interval between time of first intercourse and use of birth control (see also Aneshensel et al. 1989). In fact, Aneshensel et al. (1989) found differences between non-Latina/o and Latina/o fertility at younger ages. First, their study shows that non-Latina/os are more likely to start having intercourse at younger ages than Latina/os. In addition, the researchers also found that Mexican American teenagers have a greater likelihood of resolving a pregnancy with a live birth rather than abortion (Aneshensel et al. 1989). Therefore, beyond examining the fertility of Mexican Americans and whites as individual racial/ethnic groups, I also conduct a pooled analysis in which both groups are examined. The variables are Mexican American and white (1=Yes; 0=Otherwise), in which white is the reference category.

IV. Methodology Development

Due to the nature of the dependent variables (current and cumulative fertility), I conduct several regression models. In this section, I will describe the development of the methodology as it pertains to each one of my dependent variables. Also, I will provide a brief description of the variables included in each of the regression models for each of the samples.

1. Current Fertility and Logistic Regressions

First, because one of my dependent variables—current fertility--is a dichotomous variable, I use logistic regression to determine the likelihood of a given event (having a birth in the previous year) occurring, compared to the likelihood of the same event not occurring. The analysis is carried out below separately for each ethnic group (Mexican American and white) and for each time period (1979, 1990, and 2000). Moreover, subsequent analysis pools the data together and introduces race/ethnicity as an independent variable (Appendix 2). The latter analysis pooling Mexican Americans and whites will allow us to determine the independent effect of race/ethnicity on current fertility.

a. VIF Test

One of the assumptions of statistical analysis is that the independent variables are not highly correlated. Multicollinearity or too high correlations among the x variables is a concern in any regression analysis that causes problems and sometimes can go

unnoticed. Hence, to check for multicollinearity, I conducted the variance inflation factor test (VIF) using Stata to assess the strength of the relationships among the independent variables for every racial/ethnic group. Overall, multicollinearity is a problem when VIFs are less than 0.50. Only one variable had such a value in its VIF. This case involved the relationship between *mexam* (Mexican American) and *Spanish* (speaking Spanish at home when growing up) in the pooled sample for each of the three years examined (1979, 1990, and 2000). Therefore, I eliminated all the language variables from the analyses involving the pooled sample.

In the following section, I list the independent indicators and the logit coefficients (calculated as odds ratio) for each racial/ethnic group used in each model. As will be noted, the black sample was omitted from the analysis. The reason for this action was that several problems emerged when similar models were developed to measure the current and cumulative fertility of the samples. In the end, due to problems of perfect failure prediction and multicollinearity within the black sample, it was apparent that the factors influencing the current fertility of black women had more variation than expected. Therefore, the decision was made to exclude blacks from this study. This was a shortcoming that challenges one of the main objectives of this dissertation. However, the longitudinal analysis across groups—in this case, two (Mexican Americans and whites) —being attempted continues to advance the fertility literature.

b. Mexican Americans

In Table 6, I provide a list of the independent variables I use in the initial logistic models to analyze their influence on the current fertility of Mexican American women. For the analysis based on the 1979 period, the independent variables used include demographic variables (marital status, religion, and religiosity), generational status, and socioeconomic indicators (education, language, home ownership, occupation and mixed income). As shown in Table 6, because this is a longitudinal study, some of the reference categories changed through time (1979, 1990, and 2000) as women went through different stages in their life course. For example, in 1979 the reference category for marital status was *never married* while in 1990 it is *married.* However, in 2000 the marital status indicators had to be omitted from the logistic models because *divorce/separated/widowed* predicted failure perfectly and there was nobody in the *never married* category. For religion, the reference category was *Catholic* in all three years. Interestingly, in 2000 *no religion* was taken out of the logistic model because it predicted failure perfectly. For religious attendance or *religiosity* in 1979 and 1990 the reference category was *once per week*, while in 2000 it changed to *not at all/ infrequently*. *Spanish* is one variable that maintained its status as reference category. Moreover, when examining the socioeconomic indicators, the reference category for occupation in 1979 is *no work* explained by the young age of the respondents (14-22), while in 1990 and 2000 it switches to *sales and service*. Finally, throughout the years, there were some variables that did not have any respondents in them such as *other language* for language spoken at home when growing up besides *Spanish* and *English* (1979, 1990, and 2000),

professional for occupation in 1979, or being *never married* in 1990 and 2000. The variability of the indicators used in the models show the complexity of individual behavior through time even within the same Mexican American sample.

Because one of the primary objectives of the analysis is to compare Mexican American women's current fertility behavior through time, I decided to exclude from my models the categories where at least one of the indicators predicted failure perfectly due likely to very small number of people in that particular category. I should note, however, that this decision was taken after developing new categories to combine many of the variables where there were only a few cases to test whether the model would improve its significance levels. However, because no significant changes occurred, a second set of logistic regression models for Mexican American women were developed.

In the second set of models, where variables or their related categories which predicted failure perfectly were omitted, the following indicators are examined: *age, religiosity, generational status, education, home ownership, occupation, and mixed income* (Table 7). The reference category for religiosity in 1979 and 1990 is o*nce per week,* while in 2000 it changed to *not at all or infrequently*. For occupation, *no work* is the reference category and *professional* is omitted as no people in the Mexican American sample belonged to this category in 1979. However, in 1990 and 2000 a change in the reference category occurred for occupation becoming *sales/service*.

c. Whites

In Table 8, I list the independent variables used in the first round of logistic models for the white sample. The indicators are the same as in the original logistic models described previously for the Mexican American sample. However, there are changes in the reference categories due to the longitudinal nature of the survey. In this original set of logistic regressions, the reference category for marital status among whites changed from *never married* in 1979, to *married* in 1990 and 2000. In 2000, however, the *divorce/separated/widowed* category was not included in the model because it predicted failure perfectly. Therefore, marital status was taken out of the 2000 logistic model. Another variation in the reference categories can be seen in occupation where in 1979 it is *no work* and in 1990 and 2000 *sales/service.* There were no changes in *Protestant* being the reference category for religion for the white sample. Nevertheless, the *no religion* category was eliminated from the last model because it also predicted failure perfectly due likely to the small number of white respondents included in this category. Finally, there were no changes in religiosity (*not at all/infrequently*) and language spoken at home when growing up (*English*) as the reference categories for whites throughout the years.

However, once again, being the driving forces of this study comparison of fertility behavior not only during the life course of women of a specific racial/ethnic group, but also across groups, the decision was made to omit from the revised models any variables or indicators that predicted failure perfectly within the white, Mexican American, or pooled samples to be able to make comparisons. For this reason, in the

second set of models for the white sample, where some of the variables were omitted, the following variables were included: age, religiosity (*not at all/infrequently* is the reference category in 1979, 1990, and 2000), generational status, education, home ownership, occupation (*no work* in 1979 and *professional* in 1990 and 2000 are the reference categories) and mixed income. As can be noticed by examining the original logistic models for the white sample, religion was excluded from the final models. The reason for this exclusion is because the *no religion* category predicted failure perfectly.

d. Pooled Sample

Finally, Table 10 describes the independent indicators and their respective reference categories used in the original logistic models that were developed to examine the current fertility rate of the pooled sample (Mexican American and white women). As mentioned previously, unfortunately, the African American sample was excluded since we want to make comparisons across time and between groups. In the original set of logistic regressions, all independent indicators are included. Among these variables are marital status, religion, religiosity, race, generational status, education, home ownership, occupation, and mixed income. In 1979, *never married, Protestant, not at all/ infrequently, white*, and *no work* are the reference categories. In 1990, the same independent variables are included; however, the reference categories that changed were *married* for marital status and *sales/service* for occupation. In 2000, a problem was encountered with divorced/separated/widowed, which predicted failure perfectly. Therefore, the *marital status* category was eliminated in 2000.

Because of the problems encountered in the first set of logistic regressions for the pooled sample and for comparison purposes, the second round of regressions only include the following variables: *age, religiosity, race, generational status, education, home ownership, occupation, and mixed income*. For the most part, these are the most relevant independent variables that we want to explore to test the hypotheses described in chapter II and understand the current fertility behavior of the Mexican American, white, and pooled female samples in this study. For race, the reference category is *white,* while *no work* is the reference category for occupation. The reference categories in 1990 and 2000 for the pooled sample remained the same for religiosity and race. However, there is a change for occupation which becomes *sales/service.* Something that can be noticed is the omission of the marital status and religion categories in the second round of models. The reason for this is that some of the variables within them predicted failure perfectly. Therefore, and to be able to compare models, these variables were excluded.

In the following section I describe the development of methodology used to examine a different type of fertility: cumulative.

2. Cumulative Fertility and Zero Inflated Poisson and Negative Binomial Regressions

To examine cumulative fertility was more complicated than analyzing current fertility. Because the use of OLS having a count dependent variable could lead to inefficient biased estimates, it was first necessary to decide which type of method was the best one to measure the effect of the variables on the number of children ever born to

women in our samples. Specifically, it was essential to determine whether there was equidispersion— equality between the mean and the variance— or whether there was significant overdispersion. Similarity between the mean and the variance would support a Poisson regression, while overdispersion would direct me to conduct a negative binomial regression. Subsequently, I assessed through Vuong tests whether any of the previously described methods should be zero inflated.

I began by running a Poisson regression for each sample (Mexican American, white, and pooled sample) for each year (1979, 1990, and 2000). It should be first noted that the full Poisson regression model is estimated with the following structural model:

$$\mu_i = \exp(\alpha + X_{1i}\beta_1 + X_{2i}\beta_2 + \ldots + X_{ki}\beta_k)$$

where μ_i (mu) is the expected number of counts for the i^{th} observation (Poston et al. 2004).

To determine whether my data is Poisson distributed, I first ran several Poisson regressions without any independent variables to be able to fit a univariate Poisson distribution with a mean equal to that of my count variable of children ever born. Because I am examining three different samples (Mexican American, white, and pooled sample) across three different years, I conducted a total of three regressions for each group. Next, I compared the distribution of the count data with the univariate Poisson distribution with the same mean (Long and Freese 2001). In Appendix 2, I provide the graphs that show the observed distributions of the CEB for each group through time with their respective means. The graphs for the 1979 year show that the CEB variable is

Poisson distributed for all of my samples. However, in 1990 and 2000, the univariate Poisson distribution (shown as red dots) under-predicts the observed CEB distributions for each of the samples at the count of 0 and over-predicts at the count of 1. Therefore, the CEB distribution for Mexican Americans, whites, and the pooled sample has more 0's in the earlier counts. Because of this variability, especially in 1990 and 2000, I next looked at the Poisson goodness of fit value.

In the Poisson goodness of fit, the null hypothesis (H_0) is "that there is no difference between the observed data and the model data, indicating that the model fits the data" (Poston 2007 Lectures 9-10 Part 1 Page 34). Therefore, a small value of chi-square with a probability larger than 0.05, would indicate that the model fits the data. When this test was conducted, I found variation in the results of chi-square. The variation occurred from a value of 0.000 to a value of 1 across groups and years. Because of the results of this test, there was still not enough information to support the running of Poisson regressions in my analysis of children ever born. Having done this would pose problems of validity to my analysis as any Poisson estimate with a low value of chi-square would be inefficient. As Poston (2007 Lectures 9-10 Part 1 Page 34) notes under this scenario "the standard errors will be biased downwards, resulting in spuriously large z-values. Thus, if there is overdispersion in the scientific productivity data analyzed, the z-tests will tend to over estimate the significance of the x variables." Therefore, because some of my tests showed that there may be significant overdispersion between the mean and the variance, I also ran three negative binomial (NB) regressions for each group for further testing.

Overall, the value of Y in the negative binomial distributions is the same as for Poisson distributions. However, the variance is larger. The structural equation of the negative binomial structural equation is:

$$\mu_i = \exp(a + X_{1i} b_1 + X_{2i} b_2 + \ldots + X_{ki} b_k + \varepsilon_i)$$

Overall, as Poston (2007 Lectures 9-10 Part 1 Page 34) points out, "if there is no overdispersion, the NB regression model reduces to the Poisson regression model." To determine whether the overdispersion was significant, I first checked the alpha value which shows the amount of overdispersion in the data and a probability chi-square. If the negative binomial test shows a value that is not significant (>0.05), or if the negative binomial alpha value is zero, then we know that the NB regression model reduces to the Poisson regression model. In this case, because the overdispersion would be determined to be not significant, I would opt for the Poisson model. However, overall, the results of the negative binomial models showed that there was significant overdispersion for some groups across years. In some cases, the Prob > chi2 showed very significant levels of 0.01. Hence, in some cases the data were not Poisson distributed. Nevertheless, I encountered several challenges.

In examining the results, there were some cases where the standard tests gave contradictory results, meaning a Poisson goodness of fit of 0.000 and a significant overdispersion shown by the negative binomial tests with a value of 0.000. When this situation occurred, the coefficients were examined to see whether there was a significant difference among them or their standard errors. In many cases, Long and Freese (2001:269; see also Poston et al. 2004) notes that sometimes "standard errors are

uniformly lower in the Poisson model than in the NB model, resulting in higher z-tests in the Poisson model than in the NB model." If the coefficients are very similar, I would choose the Poisson regression—otherwise, I would opt for negative binomial regression. In Appendix 3, I provide the results of the models I conducted and include the values for each of the tests described to support the decision to conduct either Poisson or negative binomial models.

In addition, sometimes, when count data have several zeros, the Poisson and negative binomial models may not be able to account for them. Because there is evidence of the presence of a large number of zeros in my data for 1990 and 2000 as shown by the graphs provided in Appendix 2, I conducted zero inflated count regressions (Long and Freese 2001; see also Poston 2007 Lectures 9-10 Part 2 Page 2). Long and Freese (2001:251) mention that in zero inflated models it is assumed that:

> …there are two latent (i.e., unobserved) groups. An individual in the Always-0 Group (Group A) has an outcome of 0 with a probability of 1, while an individual in the Not Always-0 Group (Group ~A) might have a zero count, but there is a nonzero probability that she has a positive count.

In this dissertation, I am interested in examining the factors that influence the cumulative fertility of women. A large number of women in my sample may have a small or non-existent cumulative fertility because they choose to have no children (voluntarily childless women) as oppose to those that want to have children, but cannot (involuntarily childless women). The relevance of recognizing the different factors that lead to childlessness is that by doing this, we can change the structure of the mean by allowing these zeros to be developed by two different processes (voluntary and involuntarily

childlessness) (Long and Freese 2001). Therefore, I first modeled whether or not my female sample has children or not, with a number of x-variables related to fertility, and then I modeled how many children a woman has depending on a number of x-variables having to do with success achieving fertility. Thus, ultimately, there are two groups of women who have zero fertility. Therefore, to estimate my zero inflated Poisson or Negative Binomial models, and determine whether any of my data requires this type of regression, I used Stata to conduct this analysis. When the zero inflated Poisson (zip) or zero inflated negative binomial (zinb) regressions were run, I also examined the "Vuong statistic." The Vuong statistic compares the zero inflated Poisson regression model to the Poisson regression model and advises which is preferred. If the results show that V> 1.96, then the zip model is preferred (Long and Freese 2001). Note that in each table included in Appendix 3, I include for each sample and year the values obtained for the different tests to justify the method used.

a. Mexican Americans

As mentioned previously, the cumulative fertility examination proved to be more complex than that of the analysis of current fertility. When conducting the different regressions for the Mexican American sample, once again I became aware that to be able to provide consistency for comparisons, some variables had to be eliminated. The initial models showed that in 1990 there were very few people in the *married/divorced/widowed* category for marital status (Table 12). This led to a skewness of the model that prevented a conversion of iterations and ultimately, influenced my

decision to omit the marital status category. Also, religion was omitted because in the 2000 original Poisson regression models, there were not any people who identified with *no religion*. This is an interesting event that takes place in every group since it can be seen how with age women increasingly identify with a religious group.

In Table 13, the values for each of the tests show that for all three years the best method to examine the cumulative fertility of female Mexican American women was a zero inflated Poisson model. In 1979, the decision to select the zero inflated Poisson regression was made on the basis of having a Poisson goodness of fit value of 1.000, an alpha value for the negative binomial of 0.117, and a probability chi-squared of 0.259 which indicates insignificant overdispersion. Finally, the Vuong test gave a value of 3.20, making the zero inflated Poisson method the best decision. In 1990 and 2000, the decision of which method to use became more complicated. First, because in both years, the Poisson goodness of fit gave a value of 0.000 and when the negative binomial tests were ran, they had alpha values of 0.000. Therefore, and based on statistical conservative decision making, the coefficients of the Poisson and negative binomial models were observed and their similarity led to deciding in favor of selecting the Poisson regression. Finally, the Vuong values of 3.08 and 3.47 supported the zero inflated Poisson regression. Overall, the only demographic variable included in the second set of zero inflated Poisson regressions for the Mexican American sample was *age*. Age is a key demographic variable for cumulative fertility. Research has shown that the older a woman, the higher her cumulative fertility. *Marital status, religion* and *religiosity* were excluded from the zero inflated Poisson models because the models

were not able to reach convergence. This is likely due to not having enough variation in the variables or too few cases in one or more of the categories. Nevertheless, all of the socioeconomic indicators (*education, home ownership, and occupation*) and the generational status scores were included.

b. Whites

When examining the cumulative fertility of the white sample, I encountered a couple of problems. First, when the original model was run, it worked for 1979 and 2000 (Table 14). In 1979, the analysis showed that a zero inflated Poisson regression was the best method with a Poisson goodness of fit value of 1.000, a negative binomial alpha value of 0.000, a chi-square value of 0.499, and a Vuong value of 3.50. In this model, convergence was achieved. However, in 1990, the zero inflated negative binomial model was not able to reach convergence. In addition, even when in the original 2000 model all of the variables were included when the zero inflated Poisson regression was ran, soon I came to the understanding that the differences in the behavior of women throughout the years (1979, 1990, and 2000) and between racial/ethnic groups (Mexican Americans and whites) would not allow for this to occur. Therefore, I had to make the decision of having similar models within the groups throughout time, instead of developing similar models across groups. Therefore, the Mexican American and white cumulative fertility models differ and thus, are not completely comparable.

In Table 15, I show the variables used in the second round of regressions in which I conducted zero inflated Poisson regressions based on the Poisson goodness of

fit, alpha, chi-square, and Vuong test values. As mentioned in the previous section, if there were any doubts when examining results from the formal tests, the Poisson and negative binomial coefficients and standard errors were compared and the most statistically conservative decision was made. The variables included are religion (*protestant, no religion, catholic*, and *other religion*), generational status, education, home ownership, and mixed income. Note, however, that one of the key demographic variables that had to be omitted was *age*. The literature shows that with age people have a higher cumulative fertility. Therefore, at any given point, when age is included, there will be some skewness towards older ages. Because of this, the zero inflated Poisson and negative binomial models were not able to reach convergence. To overcome this problem, I tried the inclusion of the squared form of age in the model. Nevertheless, the models remained unable to converge. Most of the models would go to high iterations (200-300 or more) without achieving convergence. This did not occur for the Mexican American sample, however. One explanation for this may be that Mexican American women tend to have a high cumulative fertility across all age categories, which did not skew the results as much.

c. Pooled Sample

Again, the pooled sample in the analysis includes Mexican Americans and whites. Using this sample, I re-ran my original models adding also a dichotomous variable: *mexam* (Mexican American) (Table 16). In 1979, all the original variables plus *mexam* were included. However, in 1990 and 2000, I had to exclude *age*, *marital status,*

religiosity, and *occupation* because the variable predicted failure perfectly. Yet, because I wanted to achieve consistency for comparing results across groups, I excluded these variables in the second set of models for the Mexican American and white samples, just as it had been done when examining the Mexican American and white samples separately (Table 17).

V. Hypotheses

As argued in Chapter II and following the methodology described in this chapter, I analyze how and why fertility patterns differ across racial/ethnic lines. Specifically, I examine whether the fertility differentials between Mexican Americans and whites are the result of differences in the definition of the normative structure of the United States. As I shift attention to the next chapter reporting the results of my study, I reiterate below the following general hypotheses guiding my analysis. The following chapter provides a detailed analysis of the examination of these hypotheses.

- High socioeconomic status Mexican American women have more children ever born to them than low socioeconomic status Mexican American women.
- Mexican American women with higher generational status scores will have a lower cumulative fertility than women with lower generation status scores.
- Mexican American women have a higher current fertility than whites after controlling for socioeconomic status.
- Mexican American women have a higher cumulative fertility than whites after controlling for socioeconomic status.

CHAPTER IV

ANALYSIS

I. Introduction

In the last decades, the United States has experienced demographic change in the area of fertility. According to the National Center for Health Statistics (NCHS) (2003), the United States has reached a total fertility rate (TFR) of 2.0 which means it finds itself below the replacement level. However, once this figure is examined closely, the diversity of fertility behavior across racial and ethnic groups is unmasked. Unfortunately, most studies of fertility have failed to achieve a complete understanding of fertility because on the one hand, their focus has been on either current or cumulative fertility and on the other, most studies are cross-sectional. Therefore, in this dissertation, I attempt to overcome some of these shortcomings by conducting a quantitative analysis of current and cumulative fertility behavior of Mexican American and white women at three different points in their life course. To do this, I conducted several logistic and zero inflated Poisson and negative binomial regressions. In this chapter, I present the results first providing a general description of the Mexican American and white women in my sample. Then, I will examine the results of the significant indicators in my models and discuss the reasons behind their influence. Finally, I will return to my original research question that attempts to explain the higher fertility behavior of Mexican Americans in the United States.

II. General Overview of the Sample Groups

In Tables 3 and 4, I present the means and percentages that provide a description for each of the racial/ethnic groups examined in this dissertation. As already noted, the data comes from a sample of Mexican American and white women in the National Longitudinal Survey of Youth 1979-2000. Next, I will provide an overview of each of the samples at three different points in their life course.

a. Mexican American

The Mexican American sample consists of 447 women who have an average generational status score of five, the highest among the samples. Specifically, when the generational status score (GSS) of this sample was calculated, it showed that two-fifths (41%) had a generational score below 4, one-third (33%) of the sample was between levels 5 and 8, and the remaining one-fourth (26%) were individuals born abroad whose parents and grandfather were born abroad as well (level 9). This distribution helps explain why 95.5 percent of the sample spoke Spanish at home while growing up.

In 1979, Mexican American women in the sample were between ages 14 and 22, and the majority (79%) had never been married. During this point, women were asked about the total number of children they expected to have, and the average response was 2.5 children. In terms of actual fertility, the lowest sample mean of current fertility of 0.163 was among women with a GSS larger or equal than 5 and smaller than 9, and the highest mean was found among women with a GSS smaller than 5 (0.259) (Table 5). When cumulative fertility was examined, the highest average was found among women

with a GSS of 0 (0.351), even higher than the cumulative fertility of whites in 1979. In terms of religion, it is evident that the Mexican American sample is very homogenous since 86 percent of the respondents were Catholic and only 6 percent were Protestants. In addition, 35 percent of the respondents attended religious services once per week, while 29 percent did so infrequently or did not attend at all.

Another important characteristic was the socioeconomic standing of the group. Overall, the sample had on average 9.6 years of education in 1979, which improved in 1990 and 2000. Also, due to their early stage in life (ages 14-22), only 3.8 percent of respondents owned or paid mortgage on their home or had partners who did. This lack of ownership may be attributed to the lack of jobs of the majority (66%) compared to those that worked in sales and service (24%) and craft (9%). Finally, the average respondents' annual real income was $919 with an average mixed income (respondent plus partner) of $1,921.

By 1990, the Mexican American sample was on average 29 years old. Women of a GSS of 0 had a current fertility of 0.101 and a cumulative fertility of 1.879, which is higher than the average cumulative fertility of 1.626 for women with a GSS of 9 (Table 5). At this point, 96 percent of them were married or had remarried and only 4 percent were divorced, widowed, or separated. Because there was no religious affiliation or attendance question in 1990, the values included in the models were the same as the responses given in 1979. In terms of education, there was only a small improvement among the Mexican American population to about 10 years of schooling. Home ownership also increased and by 1990, 37% of the sample owned or paid mortgage for

their home or had a partner who did. Furthermore, there was a modification in the distribution of women in different occupations compared to 1979. For example, almost 45 percent of the sample worked in sales or service, 16.8 percent in professional occupations, 14.5 percent in craft, and 22.8 percent remained without a job. Finally, the respondents had an increase in their average yearly real income to $8,684 dollars with a mixed average income of $19,552.

In 2000, the sample was between 34 and 43 years old and had an average current fertility of 0.038 and a cumulative of 2.1. Specifically, Mexican American women with a GSS of 0 had an average cumulative fertility of 2.5 while for those of a GSS of 9 it was 2.3 (Table 5). The majority of the sample (about 92%) was married and 8.3 percent were divorced, widowed, or separated. By 2000, everyone had been married. In terms of religion, there was a decrease in the percentage of Catholics (71.8%) compared to 1990 (85.7%). Contrarily, there was an increase (36%) in the percentage of women who did not attend religious services or did so infrequently as well as those who attended less than three times per month (25%). There was also a very slight improvement in the number of years of education (10.3) compared to 1990 (10.0). By 2000, 57 percent of the Mexican American sample or their partners owned or paid mortgage for their house, an event which may be correlated with their increased annual mixed income ($39,874). Finally, there was a change in the percentage of women in the different occupational categories (26% in professional, 46% in sales/service, 15% in craft, and 13% with no work).

b. Whites

The white consists of 2,727 female respondents. The group's average generational status score of 8.5 and the high percentage (89%) that speak English at home indicate that white women are significantly more acculturated than Mexican American women.

In 1979, women were between 14 and 22 years old with an average age of 18. At this time, compared to the Mexican American sample, whites were less likely to have been married (16%). Overall, women expected to have an average of 2.28 children, which is 0.22 fewer children than what Mexican Americans desired. Due to their young age, the average current fertility was 0.041 while their mean cumulative fertility was 0.144. Specifically, white women of low GSS (less than 4) had the highest average current fertility (0.250), while the highest cumulative one (0.034) was among women with a GSS of greater or equal than 5 and less than 9. In terms of religion, whites were more evenly distributed between Protestantism (45%) and Catholicism (32%) compared to the Mexican American group (86% Catholics). Nevertheless, the majority of whites (48.3%) did not attend religious services or did so infrequently.

In 1979, the socioeconomic status among whites was also higher than that of Mexican Americans. In terms of education, the former had a higher level of educational attainment (11.1) and 5.7 percent owned or paid mortgage on their home even when most of them (56.7%) did not work and few (33.9%) worked in sales or service. Finally, in 1979 white women reported having an annual real income of $1,407.

By 1990, women were between 24 and 33 years old, and their average cumulative fertility was 1.066, about 0.50 lower than that of Mexican Americans. Specifically, the lowest sample mean of cumulative fertility (0.939) was found among women with a GSS of greater or equal than 5 and less than 9 and the highest mean (1.095) among women with a GSS of nine (Table 5). At this point, the majority of the sample was either married (95%) or divorced, widowed, or separated (5%). Because the 1990 survey did not include religious affiliation or participation, the values included in the models were the same as in 1979 for white women. In 1990, the white sample not only increased their years of education to 11.4, but also the percentages of home ownership (43%), as well as of those working in sales and service occupations (43.5%). Finally, the annual income reported was $10,834.

In 2000, when whites were between 34 and 43 years old, they had an average current fertility of 0.016 and a lower cumulative fertility of 1.44 compared to Mexican Americans (2.14). There were also more divorced, separated, and widowed women (7.6%), but the majority was married (92.4%). In addition, most of the sample was Protestant and there was an absolute increment of about 10 percent in the percentage that identified with this religion compared to 1990. Interestingly, the percentage of women who did not attend religious services or did so infrequently dropped to 31.1 percent while, on the other hand, more people attended religious services at least once per week (28.8%) compared to those that attended more than once per week (21.2%).

Furthermore, the average number of years of education for whites increased to about 12 years of schooling, with 57.5 percent owning or paying mortgage for their

home, the highest level ever. By 2000, 41.1 percent of the white sample worked in sales and service, 29.4 percent in the professional sector, and about 18 percent had no work. Finally, the annual real income for both the respondent and her partner was the highest of any group with an average of $46, 526.

As the previous description has shown, it is important to be aware that upward mobility is not experienced in the same degree by Mexican Americans and whites. Some scholars have suggested that the mobility differentials are due to human capital differences between the groups. However, Blau (1992) suggest that the wage differentials that exist among these two groups occurs not only because of human capital differences, but discrimination and the American wage structure that particularly favors white men (see also Levy 1995). In most cases, research has shown that Mexican Americans and other minorities have been marginalized from high paying opportunities and thus, have been concentrated in jobs with lower earnings (McCall 2000). On this marginalization, Bonilla-Silva (2001,2003) has argued that the systematic, structural, and covert racist system that exists in the United States has legitimized differentials in mobility experienced by racial/ethnic groups. Therefore, in the case of the Mexican American and white women in our sample what we observe is that the former does not improve its social status, while the latter does experience upward mobility. It is, however, still questionable whether these differentials are the result of Mexican Americans having higher TFRs or if this lack of mobility causes differences in fertility behavior.

III. Results

In this section, I will engage in the main task of this dissertation: the analysis of current and cumulative fertility of Mexican American women with white women as a comparison group. Below I will highlight the indicators that were significant in the current and cumulative fertility models and provide an overview of the results. To facilitate comparisons, in Tables 18 and 19 I list the significant indicators for each of the racial/ethnic samples. As mentioned in the previous chapter, all of the coefficients provided are in odds ratio.

a. Age

In the analysis of current fertility, age was found to be significant in 1979 and 2000. For the Mexican American sample, the logit coefficient for the *age* variable is .367; its odds ratio is $e^{.367}$ or 1.443. Thus, for every additional year of age, other things being equal, the odds of Mexican American women having a child in 1978 increased by 44 percent. The positive and significant influence of age in 1979 for current fertility was also found in the white and pooled sample analysis increasing the odds of current fertility by 40 percent and 39 percent, respectively. These results are explained by the normative structures of gender roles not only within the racial/ethnic groups, but also in the United States. Since childhood, women and men are socialized into the "proper" roles of behavior for their gender, which traditionally have been based on biological differences (Kanaiaupuni 2000). Therefore, women are often raised to believe that a fulfilled life is achieved through motherhood. Because the reproductive span of women

is short lived (15-44) compared to men's, and their peak reproductive years are in the early twenties, traditionally women have been encouraged to become mothers early in life. Since this study examines the fertility behavior of women starting in 1979, when women were 14-22 years old, it is very likely that they were socialized to internalize early age motherhood ideals. However, even when motherhood continues to be an important expectation, today, women are no longer strongly encouraged to become mothers at young ages. Nevertheless, traditional gender expectations remain as Christenson et al. (1989:265) mentions, "the domestic, the private, and the familiar have been traditionally considered feminine spaces." Therefore, it is possible that the higher cultural expectation of motherhood at young ages among Mexican Americans explains the somewhat higher influence of age on their current fertility compared to the other two samples.

Nevertheless, in 2000, the relationship between age and current fertility changes direction. At this point, the logit coefficient for the *age* variable for the Mexican American sample is -.481; its odds ratio is $e^{-.481}$ or 0.618. This means that for every additional year of age, other things being equal, the odds of Mexican American women having a child in 1999 decreased by 38 percent. This decline in current fertility among Mexican Americans is higher than for whites (30%) and the pooled sample (32%). These results can be explained in two ways. First, by 2000 women find themselves at the end of their reproductive years. Therefore, the relationship between age and fertility is negative. Second, the steeper decrease among Mexican American women may be the result of higher fertility at young ages that ultimately causes higher cumulative rates.

This means that by starting their reproduction earlier than whites, Mexican American women may have achieved their expected cumulative fertility sooner, and thus, the negative impact of age on their current fertility is higher.

Interestingly, contrary to the case of current fertility, age was not found to be significant for the cumulative fertility of the Mexican American sample. As mentioned previously, age was omitted from the white and pooled sample regressions because the models were not able to converge. However, because the inclusion of this indicator in the Mexican model did not create any problems, it was maintained. Nevertheless, age was not found to be significant for their overall achieved fertility. Even when I do not yet have a good explanation, I hypothesize that one of the reasons for this unexpected result may be the sample that was examined: Mexican Americans. I think that the timing of higher fertility (early in life) among Mexican Americans offsets the significance of age on their cumulative fertility; nevertheless, this in an issue that could be analyzed further. Next, I will examine another demographic variable found to be significant: religiosity.

b. Religion and Religiosity

Contrary to our hypothesis, religion does not have a significant influence on the current fertility of the samples. To explain this result, we can refer to studies conducted by Goldscheider (1971) who suggests that the relationship between religion and fertility is spurious, since it is caused by the relationship that the former has with education, income, etc. Hence, he argues that once socioeconomic indicators are controlled for, the

religion-fertility relationship will disappear (Goldscheider 1971). On the other hand, scholars have pointed to the secularization and marginalization of the Catholic Church in industrialized countries as the cause behind the disappearance of fertility differentials across religions (McQuillan 2004; Mosher 1992). Therefore, our finding supports the non-significant role of religion for the fertility of Mexican Americans and whites in the United States.

Nonetheless while religion was not significantly related to fertility, religiosity was. Religiosity or religious attendance is assumed to provide individuals greater adherence to the church's norms of conduct by integrating people into a religious community (McQuillan 2004). In the case of the Mexican Americans, religiosity was included in the analysis due to the high percentages of Catholic women in the sample, which encouraged us to consider the existence of variations in their religious participation. Interestingly, the only time that religiosity was significant for the Mexican American sample was in 2000. The results show that Mexican American women who do not attend or attend religious services infrequently, compared to those who attend once per week, increase their odds of having a child in 1978 by over three times. The reason why women have higher fertility may lie in the lack of attachment to religious norms. This is especially relevant among Mexican Americans, as their community and the church have traditionally played a critical role in enforcing social control. This explanation is supported by the results found among the white sample.

In the case of whites, even though religiosity was not significant in 1979 and 1990, it was in 2000. At this time, results show that white women who attend religious

services more than once per week, compared to those that do not attend or attend infrequently, decrease their odds of having a child in 1978 by over 93 percent. In the 1979 and 1990 pooled sample models, attending religious services once per week or more than once per week were found to also decrease the current fertility of women by 50 percent and 86 percent, respectively. However, for cumulative fertility, the only time that religiosity was significant was in 2000 for the pooled sample, when women who attended religious services once per week had 11 percent fewer children ever born to them compared to women who attended infrequently or never attended, holding all other variables constant.

To explain these results, I speculate that attendance at religious services creates some sort of social control among the members of the congregation or religious community, especially among Mexican Americans in 1979. Overall, religious participation may allow individuals to experience the potential of religion to offer support or remind them of the values upheld by a particular religion, thus supporting the religious norms (Sorenson et al. 1995). Therefore, in these cases participation in religious services may be reinforcing ideas of abstinence or waiting after marriage to engage in an active sexual life. In the end, the results uphold findings by Williams and Zimmer (1990) and Mosher et al. (1992) that recognize a direct relationship between religious participation and fertility. The question then becomes, why is it that religious participation influences fertility among some groups and not others at different points in time? McQuillan (2004) suggests that for religion or religious participation to influence fertility, three things must occur. First, the norms being promoted by the religious group

must have a connection to fertility. In some cases, religious groups have relaxed their rules regarding fertility, specifically in terms of contraception or abortion, and therefore, may not significantly influence fertility behavior (McQuillan 2004). Second, a communication network between religion and its members must exist and furthermore, compliance to the norms must be enforced. This point may help explain why in the case of Mexican Americans in 1979, not participating in services increases fertility three times. Finally, it is essential that members of the group have a strong sense of attachment to the religion and its members for this influence to be possible. For example, the fact that the results point out to the negative relationship between religious participation and fertility shows support for the strong religious communities promoted among Protestants and Catholics.

c. Education

As mentioned in the literature review, it is sometimes difficult to understand exactly how education interacts with fertility behavior. For the Mexican American and pooled samples, for every additional year of education, the odds of women having a child in 1978 decrease by 20 percent. To explain this relationship, some studies have suggested that with education, women are more likely to know about contraception, and therefore, prevent it. In other cases, education may give women, especially Mexican Americans, alternatives apart from the traditional gender roles legitimized by the normative structure that emphasizes motherhood as their primary role (Bean and Tienda 1987; Poston et al. 2005). However, the significance of education for current fertility in

the two samples only occurred in 1979. In 2000, education was only significant for whites decreasing their fertility by 9 percent. Because current fertility only measures a birth in the year prior to the survey, it does not control for differences in cumulative fertility among women. Therefore, the effect of education on current fertility may be random. Because of this, I conducted a third set of logistic regressions where I included a new variable—"cumulative fertility – (minus) current fertility"—to see whether the education indicator remained significant. For all samples in the years previously mentioned, education remained significant. Thus it can be said that the education effect on current fertility is not impacted by the cumulative fertility of the women prior to the survey date.

Furthermore, even when education was not as significant for current fertility in 1990 and 2000, it was found to be particularly significant for the cumulative fertility of women especially among Mexican Americans. For example, with every additional year of education, Mexican American's cumulative fertility in 1990 decreases by 5 percent, controlling for the effects of the other variables included in the model. Moreover, in 1990 and 2000 with every additional year of education, Mexican American women's cumulative fertility decreased by 13 percent and 4 percent, respectively. On the other hand, for the white and pooled samples, education was only significant in 1979 (and also in 2000 for the pooled sample) decreasing their fertility by 3 percent and 30 percent, respectively. To explain this finding, it is important to recognize that education may provide women alternatives to fertility that otherwise would not exist such as mechanisms to achieve social mobility by themselves. For example, it is possible that

through education women are exposed to the culture's ideology of meritocracy and that they would eventually internalize it. This ideology has been legitimized by the work of several scholars such as Blau and Duncan (1967). In the late 1960's, Blau and Duncan developed the status attainment theory. In their research, they argue that a strong predictor of a person's social mobility is her/his years of schooling (achieved status) rather than her/his family background (ascribed status) (Duncan and Duncan 1968; Hauser and Featherman 1977). Therefore, in the case of Mexican American women, even when they have been socialized to see motherhood as the tool to live fulfilled lives, higher education may encourage them to postpone fertility until a stable economic lifestyle—that a higher education is thought to provide them—is achieved.

Furthermore, the significance of education for Mexican Americans in all three time periods contrasts with the significance that it only had for whites in 1978. In this case, I hypothesize that the higher status that comes with being white reduces the negative effect of education since many of the alternatives that it provides Mexican Americans as a minority group are already culturally and structurally given to the former. This is supported by the work of race scholars who suggest that whites do not (or choose not to) recognize the ascribed advantages of being white such as higher income, wealth, and status (Feagin and Vera 2000; Bonilla Silva 2003). Since this systematic, institutionalized, colorblind racism continues to be perpetuated and legitimized by the state and its institutions, meritocracy is not equally experienced by all racial groups, including Mexican Americans who may have fewer alternatives compared to whites.

In addition, the negative effect of education on fertility has been explained by economists as the results of "tastes" or "opportunity costs" (Wood and Bean 1977). A main assumption of this hypothesis is that the demands of women as childbearers and workers often create role conflicts that force them to choose between one of their roles. According to this explanation, when women are highly educated or are successful in the labor market — measured by income, status, and prestige levels— they are less likely to have high fertility because of the negative "costs" of childbearing (Bean and Tienda 1987; Poston et al. 2005). This means that the "wages [women] could have made if [they] had chosen to work, are potentially greater than they are for the [less educated] women" (Bean and Tienda 1987:214; see also Poston et al. 2005). Therefore, either by providing alternatives to early motherhood or as a potential lifestyle "cost," this analysis shows that education is negatively related to fertility, especially in the case of Mexican American cumulative fertility.

d. Mixed Income and Wealth

Traditionally, income and wealth have been considered important variables for racial/ethnic studies of integration and mobility in the United States. Overall, in my analysis, income is not a significant indicator for fertility, and when it is, as in the case of whites and the pooled sample, the coefficients are negligible. Thus, other things being equal, the odds of women having a child in the previous year (or for their cumulative fertility) do not increase or decrease. One of the reasons why income may not be

significant is the inclusion of an indicator that measures wealth, in this case, home ownership.

The results show that income is not significant when home ownership is included in the model. For example, in 1990 women who owned or paid mortgage for their homes or had a husband or partner who did, compared to women who did not own or paid mortgage for their home, increased the odds of having a child in 1989 by 126 percent ($e^{0.816}$), while it increased 133 percent for white women and 169 percent for the pooled sample. In this study, I argue that home ownership provides women with a sense of security and stability that may not have been present otherwise. The same positive and significant impact takes place in 2000 when Mexican American women who own or pay mortgage for their home increase their odds of having a child in 1999 by 450 percent, while they increase 152 percent for whites, and 199 percent for the pooled sample compared to women who do not own or pay mortgage for their home. In all cases, not only are the coefficients significant, but also the impact is tremendously high.

Similar results emerge with respect to cumulative fertility. In 1979, owning or paying mortgage on a home increases the cumulative fertility of whites and the pooled samples by 75 percent and 61 percent, respectively. However, we must also be aware of the uncertainty in the direction of causation since it is possible that having children may lead to increased home ownership. In 1990, the only group for which home ownership is positive and significant is Mexican Americans. In this case, women who own their homes or pay a mortgage on their home have about 27 percent more children compared to those who are not homeowners. In 2000, home ownership increases the cumulative

fertility of whites (19%), and the pooled sample (15%). Therefore, for the most part home ownership is one of the most significant socioeconomic factors related to fertility for all samples used in the analysis.

e. Occupation

Another socioeconomic indicator that was found to be significant in some of the models was occupation, specifically the sales and service, craft, and professional sectors. While occupation was not found to be significant for the current fertility of Mexican Americans in any of the years, it was for the white and pooled samples. In 1979, when examining the case of the white and pooled samples, women who work in sales or service occupations were approximately 70 percent less likely to have had a child in 1978 compared to women who did not have a job. In 1990 and in 2000, *craft* was significant but led to contradictory results for whites. On the one hand, women working in the craft sector were 46 percent less likely to have a child in the previous year while in 2000, white women who worked in this occupation were 172 percent more likely to do so compared to women who worked in sales and service. Overall, these results can be explained by the benefits provided in each for the sectors. For example, contrary to working in sales and service, which tends to have a high concentration of women, the craft sector may provide women a higher level of stability and income in 1990 which decreases the odds of women getting pregnant. However, in 2000 women may have achieved a certain level of expected stability and thus, craft is found to be positively influencing their current fertility. In addition, participation in sales and service

occupations may encourage women to develop social networks that allow them to redefine their interactions or expose them to alternatives beyond motherhood, especially at early life stages. Accordingly, Menjivar et al. (1998) suggest that labor force participation gives women exposure to egalitarian relationships which may be transferred into their emotional relationships as well, by redefining their social contracts with their partners.

On the other hand, even though occupation was not significantly related to current fertility among Mexican American women, it was found to be related to cumulative fertility. The results show that in 1979, Mexican American women who worked in sales or service had 75 percent fewer children ever born to them compared to women who did not have a job, holding all other variables constant. By 1990 working in sales or service was no longer significant and instead, being in a professional occupation was. In fact, Mexican American women who worked in the professional sector in 1990 or 2000 had 30 percent and 25 percent fewer children ever born to them, respectively, compared to women who worked in sales or service.

The literature on the labor market links to fertility is extensive, especially as it relates to gender. Perspectives such as the dual and segmented labor market have been developed to explain the division of the labor market and the implications that this has for a segmented labor force, even along gender lines. Kallenberg and Sorensen (1979) write that the basic hypothesis of the dual and other segmented labor market conceptions "…is that the labor market is divided into two distinct sectors [primary and secondary] with little mobility between them" (356). The primary sector provides workers with

high wages, opportunities for advancement, good working conditions, and stability (Kallenberg and Sorensen 1979). On the other hand, in the secondary market, workers have low wages, few opportunities for advancement, and unstable working conditions. Furthermore, the segmented labor market theory expands these arguments and considers the position of minority populations (e.g. women) involved in the labor force. Reich et al. (1973) suggest that some jobs have been traditionally restricted to men and others to women and that the structural and social institutions in society have legitimized this division thus, impacting wages and statuses. Therefore, even when the sales and service sector is part of the secondary market, compared to not working (reference category for 1979 for all groups), it may continue to offer better opportunities for upward mobility through experience, networking, and income. However, when compared to the professional sector (primary market), it fails to provide the same benefits and thus results in higher fertility. Next, I will discuss an indicator that is directly related to the socioeconomic variables previously described.

f. Generational Status

When looking at the social and economic outcomes of the sons and daughters of immigrants, we see that even when there have been successful stories in terms of income and human capital attainment, there are also many cases in which this has not taken place. To understand these mixed results, we need to recognize that contrary to common views of immigrants and their offspring as homogenous, they are a rather heterogeneous group. Therefore, I decided to include generational status in my models. Contrary to my

hypothesis, the only time that generational status is significantly related to fertility is in the case of current fertility among whites. In 1990, the logit coefficient for the *generational status score* variable is -.089; its odds ratio is $e^{-.089}$ or 0.915. This means that for every additional level in the generational status score, other things being equal, the odds of white women having a child in 1989 decrease by 8 percent. However, even when the GSS is significant with respect to influencing fertility, the literature on immigration does not address the relevance of generational status for whites' fertility.

Because of the non-significance of generational status for Mexican Americans, it was hypothesized that the socioeconomic variables included in the models (e.g. education, occupation, and home ownership) were indirectly capturing the significant effect of GSS on fertility. Therefore, I ran several models where the only independent variable was generational status and controlled for age. The results support our assumption in 1979, since generational status had a significantly negative effect for the Mexican American and pooled samples (z=2.94 and P=0.003 for both samples). However, GSS was not significant in 1990 and 2000. Therefore, when analyzing the results for the socioeconomic indicators, it is necessary to be aware of the indirect effect of GSS included in the relationship. I will now conclude with the analysis of the driving variable of this study: race/ethnicity.

g. Race/Ethnicity

Finally, and of particular interest in this analysis, race/ethnicity was found to be a significant indicator when the cumulative fertility of the pooled sample was examined.

In 1990 and 2000, Mexican American women had 22 percent and 29 percent more children ever born to them compared to white women, respectively, controlling for the effects of the other variables included in the analysis. The fact that race/ethnicity is significant for cumulative fertility, even when other variables are controlled for, gives support to the racial/ethnic stratification perspective. In particular, the significance of this perspective in explaining the role of race/ethnicity for fertility lies in the different responses between Mexican Americans and whites to the social, cultural, and political context of the United States based on their unique racial and ethnic experience. Thus to explain the significance of race/ethnicity for the cumulative fertility of Mexican Americans, it is necessary to see race as a critical element in society.

Scholars of race (Omi and Winant 1996; Feagin 2001; Bonilla Silva 2001, 2003) have argued that race is at the very foundation of the United States not only by providing a social framework, but also a structural one in which racial membership influences not only people's access to resources, but also their level of integration and their adoption of or challenge to the normative structure (e.g. low fertility standards). Accordingly, Bonilla-Silva's work since the 1990s has argued that the different integration experiences of immigrants will vary due to their level of acceptability at the hands of the majority group. Hence, it is in the differential process of integration among groups that we can begin to understand fertility differentials across groups (Portes and Zhou 1993; Waters 2001).

Furthermore, it is necessary to understand that the aspiration to achieve structural integration may not necessarily come together with the aspiration to achieve cultural

integration. Therefore, as the racial stratification perspective argues, the responses that people may have to the same event may differ. For example, one can realize the significance of race/ethnicity for fertility differentials between Mexican Americans and whites in the United States by examining the wealth flows perspective. According to Caldwell (1982), in modern societies low fertility occurs because the direction of the flow of wealth goes from parents to children. In contemporary U.S. culture, social mobility is encouraged; and because parents make emotional and monetary investments in their children, it is rational for them to reduce fertility. Therefore, low fertility has become the dominant standard.

However, as the results show, being Mexican American has a positive impact on fertility. This population is different from whites in the way they negotiate everyday their status in society, not only structurally, but culturally as well. In the case of Mexican Americans, this negotiation takes place by examining the two ideologies being promoted by their structural community (U.S.) but also their cultural one (Mexican) which are: individualism and collectivism, respectively. Therefore, Mexican Americans' high fertility may be the way to overcome the independence of their children when growing up while also maintaining a close interaction when some members of the family are absent. Thus contrary to the white majority, Mexican Americans may continue to see the flow of wealth – not only economic, but also emotional—going from children to parents and, thus, aspire to have larger families than the white standard, even when structural assimilation has been achieved. Due to the significance of the social context of the United States and the Mexican Americans' cultural patterns and historical condition, the

higher fertility behavior of Mexican Americans found in this analysis supports the arguments of the racial stratification perspective.

IV. Final Remarks

In the previous sections, I have described the differences that exist among Mexican Americans and whites not only in the distinct way indicators influence their fertility behavior, but also the uniqueness of the definition of normative structure along racial/ethnic lines. First, the analysis shows not only that the socioeconomic position of Mexican Americans is one of disadvantage compared to whites, but also that individual social characteristics have different and often contradictory effects on the fertility behaviors of each group. In particular, this study points to the significant role that education has in reducing the current and cumulative fertility of Mexican Americans throughout their life course. Particularly, one of the arguments that emerge from these findings is that education provides Mexican American women alternatives to early motherhood and low social mobility, thus reducing their current and cumulative fertility. Also, the significantly positive effect that home ownership has for the fertility of all samples shows the importance of wealth on fertility behavior. Therefore, the fact that the direction of the influence of some social characteristics on fertility will vary and that some indicators are more influential than others as observed along racial/ethnic lines gives evidence to the complexity of fertility behavior.

Furthermore, even when the results did not show race/ethnicity to have a significant effect on current fertility, race/ethnicity had a positive and significant effect

on the cumulative behavior of Mexican Americans. The analysis confirms that being Mexican American increases women's odds of having higher cumulative fertility compared to whites. In this chapter, I have suggested that the significance of race/ethnicity rests on cultural and structural factors that stratify racial/ethnic relations. On the one hand, Mexican Americans experience marginalization as seen in their overrepresentation in the primary market and their low educational attainment, while whites hold more privileged positions. Due to these disparities, it seems almost rational that the Mexican Americans' response to the majority's standard is one that leads to the redefinition of the normative structure, especially in terms of fertility expectations.

In this chapter, I have provided an analysis of the factors that significantly influence the current and cumulative fertility of Mexican American and white women in the United States at three different points in time. First, I provided a general overview of the respondents' characteristics. Subsequently, I compared and contrasted the extent to which each of the indicators has an effect on the fertility of these groups. I have also shown the importance of examining both current and cumulative fertility to understand the complexity of fertility behavior. In addition, I have discussed the significance of race/ethnicity for the study of fertility. In the next chapter, I will provide an overview of the results. The concluding chapter will also answer the research question that attempts to explain the higher fertility behavior of Mexican Americans in the United States.

CHAPTER V

CONCLUSION

Fertility is a demographic event that has important implications not only at the individual level, but also at the macro one as can be observed when population dynamics are examined. In particular, the United States has seen tremendous growth since it has achieved a population of 300 million. Because of this, scholars have paid particular attention to the study of fertility. The rising interest on fertility among scholars has brought about an intensive study of the factors that influence the differentials that can be observed in fertility behavior, especially across racial/ethnic groups. For example, today when the fertility of the majority and minority groups is examined, it is observed that Latina/os, especially Mexican Americans, have the highest fertility rates of all groups.

Unfortunately, despite the voluminous literature examining the dynamics and differentials of fertility, extant studies suffer from several limitations. First, scholars have emphasized the study of one fertility over the other — current vs. cumulative— thus downplaying the fluidity and complexity of fertility behavior. Second, most previous studies engage in Latina/o vs. non-Latina/o comparisons, not only neglecting the heterogeneity of groups, but also reducing fertility to a rigid event. Third, when the higher fertility of Mexican Americans has been examined, scholars suggest that it is the result of the pro-natalistic cultures in Latin America. However, this research has been challenged particularly by American scholars who have found higher fertility rates

among higher-order generations compared to Mexican immigrants and the tremendous reduction in fertility that has taken place in Mexico since the 1970s. Fourth, there is a lack of fertility studies that examine the effect that both culture and structure have on the fertility behavior of racial/ethnic groups. Therefore, in this dissertation, I attempted to overcome the limitations of previous studies by engaging in an analysis of whether the normative structure of the United States, as it relates to fertility behavior, is defined along racial/ethnic lines.

After conducting a review of the literature, I conducted a quantitative analysis to determine which factors influence the current and cumulative fertility differentials among a Mexican American, a white, and a pooled sample. To do this, I conducted a set of logistic and zero inflated Poisson and negative binomial regressions. Based on the analysis, I have tested my initial hypotheses and come to the following conclusions.

First of all, as hypothesized, age is a significant factor influencing the current fertility of Mexican Americans and whites in 1979 and 2000. However, the relationship is different, since in 1979 age was found to have a positive influence on current fertility, and in 2000, it had a negative one. These results may be explained by the strong influence that the normative structure has on the marriage and childbearing activities of young women, particularly Mexican Americans. As is well known, women's reproductive span is short lived (15-44) compared to men's, and their peak reproductive years are in the early twenties. Because of this, women are encouraged to become mothers early in life which may explain the positive impact of age in 1979. On the other hand, as women grow older their fecundity declines, and thus age has a negative impact

on their fertility. Interestingly, however, age was not found to be a significant factor for the cumulative fertility of Mexican Americans, probably due to the high expectation of motherhood among this group.

In addition, and based on the results reached in the analysis, I discuss what I consider to be one of the shortcomings of the social characteristics hypothesis. The social characteristics hypothesis suggests that fertility differences among groups are the result of differences in socioeconomic status. There is an underlying assumption in the social characteristics hypothesis that suggests that each social indicator (e.g. religion, religiosity, education, occupation, income, wealth) has the same level of influence on the current and cumulative fertility of groups. Therefore, it is expected that if social differences disappear, fertility between majority and minority groups would be the same. However, the analysis shows that depending on the indicator, the sample, and the year being examined, not all social indicators have the same significant influence on the current or cumulative fertility of racial/ethnic groups. For example, religiosity, education and home ownership were found to influence fertility in different directions.

Just as the literature predicted, religion does not significantly influence the current or cumulative fertility of the samples; however, in some cases religiosity or attendance to religious services did. Mainly, not attending religious services had a significantly positive effect on the current fertility of Mexican American women. This result leads us to hypothesize that by not attending religious services Mexican American women are able to prevent being subject to the rigid religious norms of conduct legitimized by the Mexican American's normative structure that used to strongly

encourage motherhood early in life. This finding is very relevant as the positive effect of not attending religious services on fertility was not observed among the white and pooled samples.

The most important social characteristics indicator that was shown to reduce both current and cumulative fertility of women was education. It is argued that education provides women alternatives to motherhood that otherwise would not be present. Through education women get exposed not only to contraception knowledge, but to different normative structures and behaviors that may encourage them to redefine the normative structure that they have been socialized to conform to. Thus, even when women, especially Mexican Americans, are encouraged to experience motherhood early in life, they may decide to prevent or postpone fertility as they become aware of alternatives one of which may be labor force participation and social mobility. However, it is also necessary to highlight the different educational achievements that take place among Mexican American and white women. While white women continue to increase their education across their life course, as can be seen from the average years of education discussed in the previous chapter, Mexican American women experience a flat line over the three periods. Therefore, the closed opportunities brought about by low educational attainment may be the driving force behind Mexican American women's higher fertility.

Contrary to education, home ownership was found to positively influence women's current and cumulative fertility. Interestingly, this influence was found to be stronger for current than for cumulative fertility. Home ownership may give women a

sense of social and economic stability that may challenge the negative effect of education on fertility. However, it is interesting that the strong positive influence that home ownership has on the fertility behavior of the white and pooled samples is not observed among Mexican Americans. The reason for this is that the latter group may have been socialized to internalize the idea of having a large family especially to find strength and support among members in a nation where Mexican Americans continue to hold a secondary status regardless of generational status.

Therefore, the fact that social characteristics influence the current and cumulative fertility of each of our samples differently gives evidence to the complexity of fertility behavior and thus, the recognition that social characteristics are experienced differently across racial/ethnic groups. Because of the mixed results obtained when exploring the social characteristics hypothesis, we also hypothesized that there may be factors beyond socioeconomic ones that may influence fertility differentials and which could be found within the culture of the different racial/ethnic groups.

The cultural characteristics hypothesis is based on the argument that cultural norms that support large families are the cause of fertility differentials across racial/ethnic groups. Therefore, a generational status score was included in the analysis to account for these differences. However, contrary to our expectations, generational status was not found to be significant. Nevertheless, because the literature suggests that generational status influences the fertility of Mexican Americans, several models were ran to determine whether the effect of GSS was being indirectly captured by the social characteristic indicators previously described. When more restricted models excluding

potentially overlapping variables were run, the only time that GSS was significant for Mexican Americans was in 1979. Therefore, when analyzing the results for the socioeconomic indicators, it is necessary to be aware of the indirect effect of GSS included in the relationship in this year. Nevertheless, since GSS was not significant in any other model, we cannot say that the generational status of individuals has a significant influence on the current or cumulative fertility of groups.

Finally, and most importantly, being Mexican American was found to have a significantly positive influence on increasing cumulative fertility in 1990 and 2000 even after controlling for all variables included in the model. Since race/ethnicity has a significant effect on cumulative fertility, it is necessary to recognize the independent effect that racial/ethnic identification has for the fertility differentials that exist in the United States between Mexican Americans and whites. To explain this significance, I have pointed out to two factors—cultural and structural—which I argue have a dynamic influence on each other. First, it is necessary to be aware of the unique case of Mexican Americans as a group with a culture that is constantly exposed to its heritage. This is partly due to the transnational migration that takes place and the social remittances to which many Mexican Americans are exposed due to their strong ties to the Mexican community. Among traditional Mexican American culture, women are expected to achieve a fulfilled life through motherhood. Furthermore, collectivistic ideologies rule everyday interactions, which reinforce strong ties within the family and the community.

On the other hand, it is essential to acknowledge how Mexican American culture is also framed or limited in its response by the group's structural position in the United

States. Mexican Americans continue to hold a marginal position in American society as seen not only in low levels of education, but also in their low levels of income and wealth as well as overrepresentation in less prestigious occupations. Because of this, it seems almost rational that they have a different response to the majority standard (white normative structure) that promotes low fertility not only as a means for social mobility but also, a consequence of it. Therefore, the results of the analysis show that there are diverse definitions and responses to what is labeled the normative structure and that in the end these are influenced by the different cultural and structural contexts that are experienced between Mexican Americans and whites. For example, among Mexican Americans the traditional patterns of interaction continue to legitimize the flow of wealth from children to parents while the privileged cultural and structural position of whites has allowed them to experience a transformation of the direction of wealth which for some time takes place from parents to children. This dynamic process allows us to acknowledge the existence not of one static normative structure, but several which are defined along racial/ethnic lines. Therefore, I suggest that scholars should not see the higher fertility of Mexican Americans as the result of the development of feelings of marginality and insecurity, but instead the result of how the stratified position that each racial/ethnic group occupies influences the way they define and redefine the normative structure that drives their fertility behavior.

I. Shortcomings and Future Research

Despite the many strengths of this dissertation, the analysis presented has to be subject to criticism for some of the shortcomings of the sample and the longitudinal comparisons presented.

First, the analysis conducted is composed of a smaller sample size than expected, since it was unable to engage in the initially desired Mexican American, white, and black comparisons. One of the main criticisms of the fertility literature is that it tends to focus on Latina/o vs. non-Latina/o comparisons, thus neglecting other groups, especially those that do not have a history of migration. In this dissertation, the omission of blacks from the analysis occurred due to methodological issues encountered as the comparative models were developed. This exclusion is one of the major drawbacks of this study, as we wanted to achieve a fuller understanding of the factors involved in the fertility differentials among the three samples. Future studies should attempt to develop better models to compare the fertility behavior of different racial/ethnic groups acknowledging the challenging and complex task that this entails.

In addition, in this research I was not only limited by the small number of respondents that belonged to different generational statuses (1^{st}, 2^{nd}, and 3^{rd}), but also the Mexican American and white samples that I examined may not be representative of the current composition of this population. Unfortunately, there is a major lack of datasets—especially those with longitudinal designs--that include respondents who have a recent immigrant background. Thus, even though the National Longitudinal Survey is a tremendous source of information, my study was limited by the number of respondents

from 1st and 2nd generations across racial/ethnic groups. Hence, to overcome this shortcoming, I used a generational status score to capture as much as possible the differences among respondents based on their family background.

Furthermore, the respondents were first interviewed in 1979 when they were between 14 and 22 years old. At this time, the great wave of Mexican immigration had yet not occurred and therefore, the composition of the cohorts differs from the contemporary Mexican American population. For this reason I should acknowledge that since the sample was first interviewed in 1979, it may not be representative of today's average Mexican American experience. Nevertheless, I think that this analysis advances the literature by attempting to engage in the understanding of fertility as a dynamic event and thus, may serve as the stepping stone for further examination of Mexican American behavior.

Moreover, I am aware that in most cases fertility behavior is a shared decision, and as a result, it needs to include not only women's responses but men's as well. Traditionally, studies of fertility have centered their attention on female fertility. Poston et al. (2004) mention that males are usually left out of fertility studies for very practical reasons—some explanations used to justify the focus on females in fertility studies include women having a defined fertility period (age 15-44); spacing and number of children is less subject to variation compared to men; and normative reasons. However, scholars agree that fertility behavior differs depending on the sex of the respondent that is being examined (Goldscheider et al. 1996; Poston et al. 2004). Ultimately, it is important and necessary to take men's roles and commitments into account when

considering the factors involved in the decision making process of bearing and rearing children (Goldscheider et al. 1996). Therefore, this study should serve as a stepping stone for future fertility studies to incorporate men into the analysis and see whether their exclusion has validity or not, whether there are gendered differences in behavior, and also to assess directly men's opinions of women's redefinition of normative structures and the impact that this has for the family regarding fertility behavior.

In addition, as shown by the results of the analysis, there continues to be unaccounted indicators for fertility differentials across groups. Some of the macro level factors that have been suggested to have an impact on fertility behavior include region and ethnic composition. Therefore, future research should undertake multilevel analysis of fertility behavior.

Finally, even though the quantitative method conducted in this dissertation allows for the examination of the formulated hypotheses, a qualitative analysis would allow for a better understanding of the complexity of fertility behavior within and across racial/ethnic groups. As a sociologist, I recognize that human behavior is shaped and framed by cultural and structural contexts. However, I am aware of the power of individual agency. Hence, I think that there are factors that will have a different effect on the fertility behavior of individuals. Therefore, future research should develop and conduct a qualitative analysis to become aware of these factors by engaging in an in-depth conversation with a diverse group of women.

II. Policy Implications

Furthermore, this study has implications at two different levels. On the one hand, this study helps advance the academic literature focusing on fertility differentials across racial/ethnic groups. First, sociologically, the results of the dissertation will contribute to the demography, race, and gender literatures by introducing a deeper understanding of the fertility of Mexican American women using a longitudinal and comparative framework. My perusal of the literature review revealed a lack of fertility studies that focus on Mexican American-white comparisons. This is advantageous because the group that has the highest fertility in the United States is compared to one that has one of the lowest. Second, this analysis acknowledges the significant role that the stages in life in which women find themselves plays in their fertility behavior. Third, it recognizes the complexity of fertility within and across groups, thus making scholars aware of the heterogeneity of racial/ethnic groups. Fourth, by examining both current and cumulative fertility this study emphasizes the diversity of cultural and structural factors across racial and ethnic lines and explores their influence on each type of fertility. Ultimately, it is through a deeper knowledge on fertility behavior, that effective policy can be created to target social, cultural, and economic concerns.

Moreover, beyond the implications at the academic level, the results of this analysis have policy implications related to the underlying diversity of fertility behavior especially among the Mexican American female population. Of particular note is the negative effect that education has on the cumulative fertility of women. Public policy needs to consider investing in the education of Mexican American female youth as a

strategy to enhance the social and economic futures of these individuals, many of which remain in marginal positions due to their low levels of schooling. As shown by this analysis, education provides women alternatives to early motherhood and the high levels of fertility that accompany it. It is suggested that through education, women are exposed not only to contraceptive knowledge, but also to different ideas regarding their roles and expectations as women. Eventually, it is possible that through education, together with related factors, women may feel empowered to question normative expectations and, thus, bring about change to the existing social practices that confine their behavior. Finally, it is necessary to go beyond ethnocentric culture of poverty arguments when examining fertility differentials and open the floor to discuss and recognize the value brought about by the diversity of responses that exist along racial/ethnic groups by acknowledging and appreciating the unique role that these differences have in enriching U.S. culture.

REFERENCES

Abma, Joyce C. and Lauren J. Krivo. 1991. "The Ethnic Context of Mexican American Fertility." *Sociological Perspectives* 34(2):145-164.

Aneshensel, Carol S., Eve P. Fielder, and Rosina M. Becerra. 1989. "Fertility and Fertility-Related Behavior Among Mexican-American and Non-Hispanic White Adolescents." *Journal of Health and Social Behavior* 30(1):56-76.

Barringer, Herbert R., Robert W. Gardner, and Michael J. Levin. 1993. *Asian and Pacific Islanders in the United States.* New York: Russell Sage Foundation.

Bean, Frank D. and Gillian Stevens. 2003. *America's Newcomers and the Dynamics of Diversity*. New York: Russell Sage Foundation.

Bean, Frank. D. and Gray Swicegood. 1982. "Generation, Female Education, and Mexican-American Fertility." *Social Science Quarterly* 63:131-144.

Bean, Frank D. and Marta Tienda. 1987. *The Hispanic Population of the United States*. New York: Russell Sage Foundation.

Bean, Frank D., Gray Swicegood, and Ruth Berg. 2000. "Mexican-Origin Fertility: New Patterns and Interpretations" *Social Science Quarterly* 81(1):404-420.

Becker, Gary. S. 1975. *Human Capital: A Theoretical and Empirical Analysis with Special Reference to Education*. 2nd edition New York: National Bureau of Economic Research.

Blau, Francine D. 1992. "The Fertility of Immigrant Women: Evidence from High Fertility Source Countries." Pp. 93-134 in *Immigration and Workforce: Economic Consequences for the United States and Source Areas,* edited by G. Borjas and R. Freeman. Chicago: University of Chicago Press.

Blau, Peter M. and O. Dudley Duncan. 1967. *The American Occupational Structure*. New York, Wiley

Bongaarts, John. 1978. "A Framework for Analyzing the Proximate Determinants of Fertility." *Population and Development Review* 4:105-132.

——. 1982. "The Fertility-Inhibiting Effects of the Intermediate Fertility Variables." *Studies in Family Planning* (June/July): 179-189.

Bonilla-Silva, Eduardo. 2001. *White Supremacy and Racism in the Post-Civil Rights Era*. Boulder, CO: Lynne Rienner Publishers.

——. 2003. *Racism Without Racists: Color Blind Racism and the Persistence of Racial Inequality in the United States*. Lanham, MD: Rowman and Littlefield Publishers.

Bureau of Labor Statistics. 2006. *National Longitudinal Survey of Youth 1979 (NLS79*). Retrieved June 2006 (http://www.bls.gov/nls/79guide/2002/nls79g1.pdf).

Caldwell, John C. 1982. *Theory of Fertility Decline*. New York: Academic Press.

Carter, Marion. 2000. "Fertility of Mexican Immigrant Women in the U.S. a Closer Look." *Social Science Quarterly* 81(4):1073-1086.

Center for Disease Control and Prevention. 2007. *National Survey of Family Growth*. Retrieved March 2007 (http://www.cdc.gov/nchs/nsfg.htm).

Chiswick, B. R.1978. "The Effect of Americanization on the Earnings of Foreign Born Men." *Journal of Political Economy* 86:897-921.

——. 1979. "The Economic Progress of Immigrants: Some Apparently Universal Patterns." Pp. 119-58. in *Contemporary Economic Problems,* edited by W. Feller. Washington: American Enterprise Institute.

Cho, Lee-Jay, Wilson H. Grabill and Donald J. Bogue. 1970. *Differential Current Fertility in the United States*. New York: Academic Press.

Christenson, Bruce, Brigida García, and Orlandina Oliveira. 1989. "Multiple Conditions for Female Labor in Mexico." *Estudios Sociológicos* 7(20):251-280.

Clark-Carter, David. 1997. *Doing Quantitative Psychological Research: From Design to Report*. New York: Psychology Press.

Coleman, Major G. 2003. "Job Skill and Black Male Wage Discrimination." *Social Science Quarterly* 84:892-905.

Cox, Oliver. 1948. *Caste, Class, and Race: A Study in Social Dynamics*. New York: Doubleday and Company.

Cramer, C. James. 1980. "Fertility and Female Employment: Problems of Causal Direction." *American Sociological Review* 45:167-190.

Darabi, Katherine F., and Vilma Ortiz. 1987. "Childbearing Among Young Hispanic Women in the United States." *American Journal of Public Health* 77:25-28.

Darity, William, Jr. and Patrick L. Mason. 1998. "Evidence on Discrimination in Employment: Codes of Color, Codes of Gender." *Journal of Economic Perspectives* 12:63-90.

Daymont, Thomas. 1980. "Racial Equity or Racial Equality." *Demography* 17:379-393.

Department of Homeland Security. 2005. *Yearbook of Immigration Statistics*. Retrieved January 2007 (http://www.dhs.gov/ximgtn/statistics/publications/LPR05.shtm).

Duncan, Beverly and Otis Dudley Duncan. 1968. "Minorities and the Process of Stratification." *American Sociological Review* 33:356-364.

Farley Reynolds. 1996. *The New American Reality: Who We Are, How We Got Here, Where We Are Going*. New York: Russell Sage Foundation.

Feagin, Joe R. 2001. *Racist America: Roots, Current Realities and Future Reparations*. New York: Routledge.

Feagin, Joe R. and Hernan Vera. 2000. *White Racism: The Basics*. 2nd ed. New York: Routledge.

Ford, Kathleen. 1990. "Duration of Residence in the United States and the Fertility of U.S. Immigrants." *International Migration Review* 24(1):34-68.

Forste, Renata and Marta Tienda. 1996. "What's Behind Racial and Ethnic Fertility Differentials?" *Population and Development Review*, Vol. 22, Supplement: Fertility in the United States: New Patterns, New Theories. (1996), pp.109-133.

Fossett, Mark A., Omer Galle, and Jeffrey Burr. 1989. "Racial Occupational Inequality, 1940-1980: A Research Note on the Changing Impact of the Regional Distribution of the Black Population." *Social Forces* 68:415-427.

Frank, Reanne and Patrick Heuveline. 2005. "A Crossover in Mexican and Mexican-American Fertility Rates: Evidence and Explanations for an Emerging Paradox." *Demographic Research* 12(4). Retrieved April 2005 (http://www.demographic-research.org/Volumes/Vol12/4/12-4.pdf).

Goldscheider, Calvin. 1971. "Religion, Minority Group Status, and Fertility." Pp. 270-98 in *Population, Modernization, and Social Structure*. Boston: Little Brown.

Goldscheider, Calvin and Peter R. Uhlenberg. 1969. "Minority Group Status and Fertility." *American Journal of Sociology* 74:361-373.

Gordon, Milton M. 1964. *Assimilation in American Life: The Role of Race, Religion, and National Origins*. New York: Oxford University Press.

Greeley, Andrew M. 1977. *The American Catholic*. New York: Basic.

Greenhalgh, Susan. 1990. "Toward a Political Economy of Fertility: Anthropological Contributions." *Population and Development Review* 16(1):85-106.

Hamilton, Darrick. 2000. "Issues Concerning Discrimination and Measurement of Discrimination in U.S. Labor Markets." *African American Research Perspectives* 6:98-111.

Hauser, Robert M. & David L. Featherman. 1977. "Socioeconomic Achievements of American Men, 1962-1972." Pp. 123-139 in *The Process of Stratification: Trends and Analyses,* edited by Robert M. Hauser and David L. Feathermann. New York, NY: Academic Press.

——. 1974. "White-Nonwhite Differentials in Occupational Mobility Among Blacks the United States, 1962-1972." *Demography* 11:247-265.

Hirschman, Charles. 1994. "Why Fertility changes." *Annual Review of Sociology* 20:203-233.

Instituto Nacional de Estadística, Geografía, e Informática. 2006. Retrieved February 2007 (http://www.inegi.gob.mx/est/contenidos/espanol/rutinas/ept.asp?t= mpob16&c =3193).

Johnson, Nan E. 1979. "Minority Group Status and the Fertility of Black Americans, 1970: A New Look." *The American Journal of Sociology* 84(6):1386-1400.

Jonsson, S.H. and M.S. Rendall. 2004. "The Fertility Contribution of Mexican Immigration to the United States." *Demography* 41(1):129-150

Kanaiaupuni, Shawn Malia. 2000. "Reframing the Migration Question: An Analysis of Men, Women, and Gender in Mexico." *Social Forces* 78(4):1311-1348.

Kanh, Joan R. 1988. "Immigrant Selectivity and Fertility Adaptation in the United States." *Social Forces* 67(1):108-128.

——. 1994. "Immigrant and Native Fertility during the 1980s: Adaptation and Expectations for the Future." *International Migration Review* 28(3): 501-519.

Kasarda, John D., John O.G. Billy, and Kirsten West. 1986. *Status Enhancement and Fertility: Reproductive Responses to Social Mobility and Educational Opportunity*. Orlando, FL.: Academic Press.

Kallenberg, A. and A. Sorensen. 1979. "The Sociology of Labor Markets" *Annual Review of Sociology* 5:351-379.

Kohler, Hans-Peter, Francesco C. Billari, and Jose Antonio Ortega. 2002. "The Emergence of Lowest-low Fertility in Europe During the 1990s." *Population and Development Review* 28:641-680.

Lee, Everett S. and Anne S. Lee. 1959. "The Future Fertility of the American Negro." *Social Forces* 37(March): 228-31.

Lehrer, Evelyn L. 2004. "Religion as a Determinant of Economic and Demographic Behavior in the United States." *Population and Development Review* 30(4):707-726.

Levitt, Peggy. 1998. "Social Remittances: Migration Driven Local-Level Forms of Cultural Diffusion." *International Migration Review* 32(4):926-48.

Levy, Frank. 1995. "Incomes and Income Inequality." Pp. 1-58 in *State of the Union: America in the 1990s,* edited by Reynolds Farley. New York, NY: Russell Sage Foundation.

Lopez, David E. and Georges Sabagh. 1978. "Untangling Structural and Normative Aspects of the Minority Status Fertility Hypothesis." *American Journal of Sociology* 83:1491-1497

London, Bruce and Kenneth Hadden. 1989. "The Spread of Education and Fertility Declines: A Thai Province Level Test of Caldwell's 'Wealth Flows' Theory." *Rural Sociology* 54:17- 36.

Long, Scott and Jeremy Freese. 2001. *Regression Models for Categorical Dependent Variables Using Stata*. College Station, TX: Stata Press

Lyman, Stanford. 1968. "The Race Relations Cycle of Robert E. Park." *Pacific Sociological Review* 11:16-22.

Marcum, John P. and Frank D. Bean. 1976. "Minority Group Status as a Factor in the Relationship Between Mobility and Fertility: The Mexican American Case" *Social Forces* 55(1):135-148.

Mason, Karen. 1997. "Explaining Fertility Transitions." *Demography* 34:443-454.

McCall, Leslie. 2000. "Explaining Levels of Within-Group Wage Inequality in U.S. Labor Markets." *Demography* 37:415-430.

McDaniel, Antonio. 1995. "The Dynamic Racial Composition of the United States." *Daedalus* 124(1):179-198.

——. 1996. "Fertility and Racial Stratification." *Population and Development Review*, Vol.22, Supplement: Fertility in the United States: New Patterns, New Theories. pp.134-150.

McQuillan, Kevin. 2004. "When does Religion Influence Fertility?" *Population and Development Review* 30(1):25-56.

Menjivar, Cecilia, Julie DaVanzo, Lisa Greenwell, and R. Burciaga Valdez. 1998. "Remittance Behavior Among Salvadoran and Filipino Immigrants in Los Angeles" *International Migration Review* 32(1):97-126.

Mexican Migration Project. 2007. [computer file] Office of Population Research, Princeton University. Retrieved March 2007 (http://mmp.opr.princeton.edu/).

Mosher, W.D. and G.E. Hendershot. 1984. "Religious Affiliation and the Fertility of Married Couples" *Journal of Marriage and the Family* 46:671-677.

Mosher, William, Linda B. Williams, and David P. Johnson. 1992. "Religion and Fertility in the United States: New Patterns." *Demography* 29(2):199-214.

Namerow, Pearila and Judith E. Jones. 1982. "Ethnic Variation in Adolescent Use of a Contraceptive Service." *Journal of Adolescent Health Care* 3:165-72.

National Center for Health Statistics. 2003. "Revised Birth and Fertility Rates for the 1990s and New Rates for Hispanic Populations. 2000 and 2001: United States." *National Vital Statistics Reports*. Retrieved December 2006 (http://www.cdc.gov/nchs/data/nvsr/nvsr51/nvsr51_12.pdf).

Oliver, Melvin L. and Thomas M. Shapiro. 1995. *Black Wealth/White Wealth: A New Perspective on Racial Inequality*. New York: Routledge.

Omi, Michael and Howard Winant. 1996. *Racial Formation in the United States 1960s to the 1990s*. New York: Routledge

Park, R. and E. Burgess. 1921. *Introduction to the Science of Sociology*. Student Edition. Abridged by M. Janowitz. Chicago: University of Chicago Press.

Phillips, Julie A & Massey, Douglas S. 2000. "Engines of Immigration: Stocks of Human and Social Capital in Mexico" *Social Science Quarterly* 81(1):33-48.

Portes, Alejandro and Cynthia Truelove. 1987. "Making Sense of Diversity: Recent Research on Hispanic Minorities in the United States." *Annual Review of Sociology* 13:359-385.

Portes, Alejandro, and Robert L. Bach. 1985. *Latin Journey*. Berkeley: University of California Press.

Portes, Alejandro, and Ruben Rumbaut. 1997. *Immigrant America: A Portrait*. Berkeley: University of California.

Portes, Alejandro and Min Zhou. 1993. The New Second Generation: Segmented Assimilation and Its Variants." *The Annals of the American Academy of Political and Social Sciences* 530(Nov.):74-96.

Poston, Dudley L. Jr. 1994. "Patterns of Economic Attainment of Foreign-Born Male Workers in the United States." *International Migration Review* 28(3): 478-500.

——. 2000. "Social and Economic Development and the Fertility Transition in Mainland China and Taiwan." *Population and Development Review* 26 (Supplement):40-60.

——. 2007. Quantitative Methods Lecture Notes. Texas A&M University. Department of Sociology.

Poston, Dudley L. Jr. and Chiung-Fang Chang, 2004. "Bringing Males In: A Critical Demographic Plea for Incorporating Males in Methodological and Theoretical Analyses of Human Fertility." *Critical Demography*, forthcoming.

Poston, Dudley L. Jr., Chiung-Fang Chang, and Hong Dan, 2005 "Fertility Differences Between the Majority and Minority Nationalities in China." *Population Research and Policy Review*, forthcoming.

Reich, Michael, R. Edwards, and D. Gordon. 1973. *Labor Market Segmentation and Labor Market Information Systems.* Research report for the U.S. Department of Labor. Washington, DC.

Richardson, Chad and R. Resendiz. 2006. *On the Edge of the Law Culture, Labor, and Deviance on the South Texas Border*. Austin: University of Texas Press.

Rindfuss, Ronald R. 1976. "Fertility and Migration: The Case of Puerto Rico." *International Migration Review* 9(2): 191-203.

Rindfuss, Ronald R., and James A Sweet. 1977. *Postwar Fertility Trends and Differentials in the United States*. New York: Academic Press.

Ryscavage, Paul. 1999. *Income Inequality in America: An Analysis of Trends*. Armonk, NY:M.E. Sharpe.

Saenz, Rogelio. 2000. "Earning Patterns of Mexican Workers in the Southern Region: A Focus on Nonmetro/Metro distinctions." *Southern Rural Sociology* 16:60-95.

Saenz, Rogelio, Maria Cristina Morales, and María Isabel Ayala. 2004. "United States: Immigration to the Melting Pots of the Americas." Pp. 211-232 in M.I. Toro and M. Alicea (eds.), *Migration: A Global View*. Westport, CT: Greenwood Press.

Sander, William. 1992. "Catholicism and the Economics of Fertility." *Population Studies* 46(3):477-489.

Smith-Lovin, Lynn and Ann R. Tickamyer. 1982. "Models of Fertility and Women's Work." *American Sociological Review* 47:561-566.

Sorenson, Ann Marie. 1985. "Fertility Expectations and Ethnic Identity Among Mexican-American Adolescents: An Expression of Cultural Ideas." *Sociological Perspectives* 28:339-360.

Stolzenberg, Ross M. and Martha Tienda. 1997. "English Proficiency, Education, and the Conditional Economic Assimilation of Hispanic and Asian Origin Men." *Social Science Research* 26:25-51.

Tainer, Evelina M. 1986. "English Language Proficiency and the Determinants of Earnings among Foreign Born Men." Paper presented at annual meeting of Population Association of America, San Francisco, CA. April.

Trigueros, Paz. 1992. "Unidades Domesticas y Papel de la Mujer en un Poblado Rural en el que se Practica la Migración a Estados Unidos." Pp.78-104 in *La Investigación Sobre la Mujer: Informes en sus Primeras Versions, Serie de Documentos de Investigación No 2*, edited by Programa Interdisciplinario de Estudios de la Mujer. México City: Colegio de México.

Uhlenberg, Peter. 1973. "Fertility Patterns Within the Mexican-American Population." *Social Biology* 20: 30-39.

United States Census. 2000. *Summary File 3*. Retrieved January 2007 (http://www.census.gov/Press-Release/www/2002/sumfile3.html).

Waters, Mary C. 2001. *Black Identities: West Indian Immigrant Dreams and American Reality*. Cambridge, MA: Harvard University Press.

Waters, Mary C. and Karl Eschbach. 1995. "Economic Inequality among American Racial and Ethnic Groups". *Annual Review Sociology* 21:419-446.

Williams, Linda and Basil Zimmer. 1990. "The Changing Influence of Religion on U.S. Fertility: Evidence from Rhode Island." *Demography* 27(3):475-81.

Wood, Charles H. and Frank D. Bean. 1977. "Offspring Gender and Family Size: Implications from a Comparison of Mexican Americans and Anglo Americans." *Journal of Marriage and the Family* 39(1):129-139.

Yinger, J. Milton. 1994. *Ethnicity: Source of Strength? Source of Conflict*? Albany, NY: State University of New York Press.

APPENDIX 1

Table 1. Occupational Categories.

Indicators	Industries and occupations
Professional	Professional, technical and kindred Managers, officials, and proprietors
Sales and Service	Sales workers Clerical and kindred Service workers, except private household
Craft	Craftsmen, foremen, and kindred Laborers except farm Farmers and farm managers Farm laborers and foreman
Not Working	Did not work Never worked

Source: National Longitudinal Survey of Youth Codebook 1979, 1990, 2000.

Table 2. Indicators used in Logistic and Zero Inflated Poisson/Negative Binomial Regressions to Examine Current and Cumulative Fertility of Women in the United States 1979, 1990, 2000.

Dependent Variables	
Current Fertility	Yes=1; Otherwise=0
Cumulative Fertility	Children Ever Born
Independent Variables	
Generational Status Score	Levels: 0-9
Socioeconomic Indicators	
Education	Years of Schooling
Language	
Spanish	Yes=1; Otherwise=0
English	Yes=1; Otherwise=0
Other Language	Yes=1; Otherwise=0
Occupation	
Professional	Yes=1; Otherwise=0
Sales/Service	Yes=1; Otherwise=0
Craft	Yes=1; Otherwise=0
No Work	Yes=1; Otherwise=0
Respondent and Spouses Income	Annual Real Income
Wealth: Home Ownership	Yes=1; Otherwise=0
Demographic Indicators	
Age	Years
Marital Status	
Married	Yes=1; Otherwise=0
Divorce/Separated/Widowed	Yes=1; Otherwise=0
Never Married	Yes=1; Otherwise=0
Religion	
Catholic	Yes=1; Otherwise=0
Protestant	Yes=1; Otherwise=0
Other Religion/Jewish	Yes=1; Otherwise=0
No Religion	Yes=1; Otherwise=0
Religiosity	
Not at all/infrequently	Yes=1; Otherwise=0
<3 per month	Yes=1; Otherwise=0
Once per week	Yes=1; Otherwise=0
>1 per week	Yes=1; Otherwise=0

Table 3. Mexican American, White, and Pooled Sample Means for 1979, 1990, and 2000.

	1979			1990			2000		
Indicators	Pooled Sample	Mexican American	Whites	Pooled Sample	Mexican American	Whites	Pooled Sample	Mexican American	Whites
Current Fertility	0.044	0.062	0.041	0.097	0.123	0.093	0.019	0.038	0.016
Cumulative Fertility	0.155	0.223	0.144	1.136	1.563	1.066	1.535	2.138	1.436
Age of Respondent	18.106	17.686	18.174	29.319	29.000	29.372	39.314	38.991	39.367
# of children respondent expect to have	2.318	2.507	2.280	2.318	2.507	2.280	2.318	2.507	2.280
Marital Status									
Married	0.168	0.196	0.163	0.953	0.959	0.952	0.922	0.917	0.923
Divorce/Separated/Widowed	0.026	0.013	0.028	0.046	0.040	0.047	0.077	0.082	0.076
Never Married	0.805	0.789	0.807	NS	NS	NS	NS	NS	NS
Religion									
Protestant	0.397	0.058	0.452	0.397	0.058	0.452	0.497	0.176	0.550
No Religion	0.094	0.030	0.105	0.094	0.031	0.105	0.043	0.006	0.049
Catholic	0.393	0.856	0.317	0.393	0.856	0.317	0.347	0.718	0.286
Other Religion	0.114	0.051	0.111	0.114	0.053	0.124	0.095	0.049	0.102
Religiosity									
Not at all/infrequently	0.455	0.288	0.482	0.455	0.288	0.482	0.316	0.355	0.310
<3 per month	0.199	0.268	0.188	0.199	0.268	0.188	0.198	0.250	0.189
Once per week	0.250	0.348	0.233	0.250	0.348	0.233	0.286	0.281	0.287
>1 per week	0.095	0.096	0.094	0.095	0.096	0.094	0.197	0.111	0.211
Generational Status Score	8.069	5.302	8.523	8.069	5.302	8.523	8.069	5.302	8.523
Education	10.848	9.610	11.051	11.229	10.049	11.422	11.412	10.306	11.594
Language									
Spanish	0.152	0.955	0.021	0.152	0.955	0.021	0.152	0.955	0.021
English	0.774	0.044	0.894	0.774	0.044	0.894	0.774	0.044	0.894
Other Language	0.225	0.000	0.084	0.225	0.000	0.084	0.225	0.000	0.084

Table 3. Continued

Indicators	1979			1990			2000		
	Pooled Sample	Mexican American	Whites	Pooled Sample	Mexican American	Whites	Pooled Sample	Mexican American	Whites
Occupation									
Professional	0.029	NS	0.033	0.215	0.167	0.222	0.289	0.259	0.294
Sales/Service	0.324	0.234	0.339	0.436	0.447	0.435	0.417	0.458	0.410
Craft	0.064	0.093	0.060	0.101	0.145	0.094	0.105	0.145	0.099
No Work	0.580	0.664	0.566	0.219	0.228	0.218	0.172	0.129	
Mixed Income	2430	1921	2513	25050	19552	25951	45590	39874	46526
Respondent's Income	1338	919	1407	10531	8684	10834	17729	17413	17780
Spouse's Income	1092	1001	1106	14518	10867	15117	27861	22461	28746
Home Ownership	0.054	0.038	0.057	0.421	0.364	0.430	0.574	0.570	0.575
NS No Sample									
n	3174	447	2727	3174	447	2727	3174	447	2727
Reference Category									

Table 4. Mexican American, White, and Pooled Samples' Percentages for 1979, 1990, and 2000.

	1979			1990			2000		
Indicators	Pooled Sample	Mexican American	Whites	Pooled Sample	Mexican American	Whites	Pooled Sample	Mexican American	Whites
Age of R									
14	6.11	6.94	5.98	0.35	0.45	0.33	0.35	0.22	0.26
15	10.27	12.30	9.94	2.33	3.13	2.20	2.33	3.36	2.57
16	11.78	17.45	10.85	10.65	11.86	10.45	10.65	11.19	10.38
17	12.13	13.42	11.92	11.06	13.87	10.60	11.06	16.11	10.34
18	12.70	12.98	12.65	11.94	17.67	11.00	11.94	16.33	11.44
19	14.11	10.51	14.70	14.71	11.19	15.29	14.71	11.63	15.29
20	14.34	10.96	14.89	15.85	12.30	16.43	15.85	10.96	15.66
21	15.44	12.53	15.91	13.30	12.98	13.35	13.30	13.20	13.46
22	3.12	2.91	3.15	12.67	8.72	13.31	12.67	9.62	13.46
				7.15	7.83	7.04	7.15	7.38	7.15
# children R expect to have									
0	10.05	8.28	10.34	10.05	8.28	10.34	10.05	8.28	10.34
1	10.71	13.42	10.27	10.71	13.42	10.27	10.71	13.42	10.27
2	42.72	36.68	44.04	42.72	36.68	44.04	42.72	36.68	44.04
3	20.04	20.36	19.99	20.04	20.36	19.99	20.04	20.36	19.99
4	11.00	14.99	10.34	11.00	14.99	10.34	11.00	14.99	10.34
5	3.12	4.92	2.82	3.12	4.92	2.82	3.12	4.92	2.82
6	1.45	2.01	1.36	1.45	2.01	1.36	1.45	2.01	1.36
7	0.54	1.12	0.44	0.54	1.12	0.44	0.54	1.12	0.44
8	0.19	NS	0.22	0.19	NS	0.22	0.19	NS	0.22
9	0.03	NS	0.04	0.03	NS	0.04	0.03	NS	0.04
10	0.03	NS	0.04	0.03	NS	0.04	0.03	NS	0.04
11	0.06	0.22	0.04	0.06	0.22	0.04	0.06	0.22	0.04
12	0.06	NS	0.07	0.06	NS	0.07	0.06	NS	0.07

Table 4. Continued.

Indicators	1979			1990			2000		
	Pooled Sample	Mexican American	Whites	Pooled Sample	Mexican American	Whites	Pooled Sample	Mexican American	Whites
Marital Status									
Married	16.86	19.69	16.39	95.37	95.97	95.27	92.28	91.72	92.37
Divorce/Separated/Widowed	2.61	1.34	2.82	4.63	4.03	4.73	7.72	8.28	7.63
Never Married	80.53	78.97	80.78	NS	NS	NS	NS	NS	NS
Religion									
Protestant	39.73	5.82	45.29	39.73	5.82	45.29	49.75	17.67	55.01
No Religion	9.48	3.13	10.52	9.48	3.13	10.52	4.35	0.89	4.95
Catholic	39.35	85.68	31.76	39.35	85.68	31.76	34.75	71.81	28.68
Other Religion	11.44	5.37	12.43	11.44	5.37	12.43	9.51	4.92	11.63
Religiosity									
Not at all/infrequently	45.56	28.86	48.29	45.56	28.86	48.29	31.70	35.57	31.06
<3 per month	19.91	26.85	18.81	19.91	26.85	18.81	19.85	25.06	19.00
Once per week	25.02	34.90	23.40	25.02	34.90	23.40	28.67	28.19	28.75
>1 per week	9.51	9.62	9.50	9.51	9.62	9.50	19.79	11.19	21.20
Generational Status Score									
0	4.66	24.16	1.47	4.66	24.16	1.47	4.66	24.16	1.47
1	0.06	0.45	NS	0.06	0.45	NS	0.06	0.45	NS
2	0.60	3.36	0.15	0.60	3.36	0.15	0.60	3.36	0.15
3	0.60	0.22	0.66	0.60	0.22	0.66	0.60	0.22	0.66
4	2.77	13.20	1.06	2.77	13.20	1.06	2.77	13.20	1.06
5	0.79	0.22	0.88	0.79	0.22	0.88	0.79	0.22	0.88
6	3.43	10.96	2.20	3.43	10.96	2.20	3.43	10.96	2.20
7	1.48	2.46	1.32	1.48	2.46	1.32	1.48	2.46	1.32
8	12.51	19.24	11.40	12.51	19.24	11.40	12.51	19.24	11.40
9	73.09	25.73	80.86	73.09	25.73	80.86	73.09	25.73	80.86

Table 4. Continued.

	1979			1990			2000		
Indicators	Pooled Sample	Mexican American	Whites	Pooled Sample	Mexican American	Whites	Pooled Sample	Mexican American	Whites
Education									
Language									
Spanish	15.28	95.53	2.13	15.28	95.53	2.13	15.28	95.53	2.13
English	77.44	4.47	89.40	77.44	4.47	89.40	77.44	4.47	89.40
Other Language	7.28	NS	8.47	7.28	NS	8.47	7.28	NS	8.47
Occupation									
Professional	2.93	0.67	3.30	21.52	16.78	22.30	28.92	25.92	29.41
Sales/Service	32.45	23.49	33.92	43.70	44.74	43.53	41.75	45.86	41.07
Craft	6.49	9.40	6.01	10.18	14.54	9.46	10.55	14.54	9.90
No Work	58.03	66.44	56.66	21.96	22.82	21.82	17.23	12.98	17.93
Mixed Income									
Home Ownership	5.45	3.80	5.72	42.16	36.47	43.09	57.47	57.05	57.54
NS No Sample	3471	447	2727	3471	447	2727	3471	447	2727
n									
Reference Category									

Table 5. Current and Cumulative Fertility Means of Mexican American, White, and Pooled Samples for 1979

	Current Fertility								
	1979			1990			2000		
Generational Status Score	Pooled Sample	Mexican American	Whites	Pooled Sample	Mexican American	Whites	Pooled Sample	Mexican American	Whites
0	0.087	0.083	0.100	0.128	0.101	0.200	0.047	0.046	0.050
1	0.000	0.000	NS	0.000	0.000	NS	0.000	0.000	NS
2	0.105	0.066	0.250	0.105	0.133	0.000	0.000	0.000	0.000
3	0.105	0.000	0.111	0.157	0.000	0.166	0.000	0.000	0.000
4	0.034	0.033	0.034	0.136	0.152	0.103	0.022	0.033	0.000
5	0.040	0.000	0.041	0.120	0.000	0.125	0.000	0.000	0.000
6	0.082	0.142	0.033	0.091	0.142	0.050	0.018	0.020	0.016
7	0.042	0.000	0.055	0.085	0.181	0.055	0.000	0.000	0.000
8	0.030	0.023	0.032	0.100	0.093	0.102	0.017	0.023	0.016
9	0.041	0.060	0.040	0.093	0.139	0.090	0.018	0.060	0.016

	Cumulative Fertility								
	1979			1990			2000		
Generational Status Score	Pooled Sample	Mexican American	Whites	Pooled Sample	Mexican American	Whites	Pooled Sample	Mexican American	Whites
0	0.331	0.351	1.025	1.648	1.879	1.025	2.168	2.462	1.375
1	0.000	0.000	NS	1.500	1.500	NS	2.000	2.000	NS
2	0.210	0.133	1.500	1.526	1.533	1.500	1.947	2.000	1.750
3	0.263	0.000	0.888	0.842	0.000	0.888	1.315	0.000	1.388
4	0.113	0.135	0.862	1.090	1.203	0.862	1.647	1.847	1.241
5	0.120	0.000	1.041	1.120	3.000	1.041	1.320	3.000	1.250
6	0.155	0.244	0.750	1.009	1.326	0.750	1.522	1.979	1.150
7	0.148	0.090	1.000	1.191	1.818	1.000	1.659	2.000	1.555
8	0.105	0.127	0.961	1.065	1.441	0.961	1.478	1.837	1.379
9	0.153	0.243	1.095	1.121	1.626	1.095	1.498	2.321	1.455
NS: No Sample									
n	3471	447	2727	3471	447	2727	3471	447	2727

Table 6. Results of Logistic Regressions as Odds Ratio of Current Fertility of Mexican American Women for 1979, 1990, and 2000.

Indicators	1979	1990	2000
Marital Status			
Married	17.478***	Ref	
Divorce/Separated/Widowed	20.738**	0.601	
Never Married	Ref	NS	NS
Religion			
Protestant	1.562	0.489	0.120
No Religion	0.724	0.845	
Catholic	Ref	Ref	Ref
Other Religion	1.729	1.282	0.733
Religiosity			
Not at all/infrequently	3.136*	0.479	Ref
<3 per month	2.291	1.397	0.733
Once per week	Ref	Ref	0.575
>1 per week	0.833	1.424	1.541
Generational Status Score	1.012	1.046	0.981
Education	0.894	1.041	0.818*
Language			
Spanish	Ref	Ref	Ref
English	0.433	1.100	3.618
Other Language	NS	NS	NS
Occupation			
Professional	NS	0.598	1.930
Sales/Service	0.466	Ref	Ref
Craft	0.551	1.251	1.142
No Work	Ref	1.585	1.061
Mixed Income	1.000	1.000	1.000
Home Ownership	0.813	2.284*	5.534*
n	447	447	447

*** = Significant at 0.000 level

** = Significant at 0.01 level

* = Significant at 0.05 level

NS: No Sample

Indicator not included in model

Table 7. Results of Logistic Regressions as Odds Ratio of Current Fertility of Mexican American Women for 1979, 1990, and 2000.

Indicators	1979	1990	2000
Age	1.443**	1.072	0.618**
Religiosity			
Not at all/infrequently	3.010*	0.452	Ref
<3 per month	2.095	0.746	1.254
Once per week	Ref	Ref	1.153
>1 per week	0.995	1.484	2.432
Generational Status Score	1.026	1.049	0.961
Education	0.800*	1.027	0.917
Occupation			
Professional	NS	0.596	1.395
Sales/Service	0.352	Ref	Ref
Craft	0.398	1.271	1.074
No Work	Ref	1.676	0.785
Mixed Income	1.000	1.000	1.000
Home Ownership	0.904	2.261*	5.495*
n	447	447	447

*** = Significant at 0.000 level

** = Significant at 0.01 level

* = Significant at 0.05 level

NS: No Sample

Table 8. Results of Logistic Regressions as Odds Ratio of Current Fertility of White Women for 1979, 1990, and 2000.

Indicators	1979	1990	2000
Marital Status			
Married	27.91***	Ref	Ref
Divorce/Separated/Widowed	14.11***	0.758	
Never Married	Ref	NS	NS
Religion			
Protestant	Ref	Ref	Ref
No Religion	1.043	0.242	
Catholic	1.768*	0.107	1.139
Other Religion	1.171	0.143	0.987
Religiosity			
Not at all/infrequently	Ref	Ref	Ref
<3 per month	0.692	0.116	0.875
Once per week	0.432	0.061	1.188
>1 per week	2.435*	0.264	1.032
Generational Status Score	0.145*	0.101*	0.790
Education	0.151*	0.080*	0.840**
Language			
Spanish	0.692	0.118	0.710
English	Ref	Ref	Ref
Other Language	0.297	0.213	0.135
Occupation			
Professional	0.453	0.132	2.073*
Sales/Service	0.690*	Ref	Ref
Craft	0.204	0.612*	2.823*
No Work	Ref	0.051	0.763
Mixed Income	1.000	1.000***	1.000
Home Ownership	0.596*	0.845***	2.437
n	2727	2727	2727

*** = Significant at 0.000 level

** = Significant at 0.001 level

* = Significant at 0.05 level

NS No Sample

Indicator not included in model

Table 9. Results of Logistic Regressions as Odds Ratio of Current Fertility of White Women for 1979, 1990, and 2000.

Indicators	1979	1990	2000
Age	1.404***	1.019	0.702***
Religiosity			
Not at all/infrequently	Ref	Ref	Ref
<3 per month	0.704	0.918	0.961
Once per week	0.559	1.153	1.286
>1 per week	0.074*	1.319	1.124
Generational Status Score	0.911	0.914*	0.918
Education	0.761***	0.913*	0.984
Occupation			
Professional	0.283	0.883	0.589
Sales/Service	0.300***	Ref	Ref
Craft	0.585	0.543*	2.721*
No Work	Ref	1.072	0.792
Mixed Income	1.000***	1.000***	1.000*
Home Ownership	3.177***	2.330***	2.516*
n	2727	2727	2727

*** = Significant at 0.000 level

** = Significant at 0.001 level

* = Significant at 0.05 level

Table 10. Results of Logistic Regressions as Odds Ratio of Current Fertility of Mexican American, White, and Pooled Samples for 1979, 1990, and 2000.

Indicators	1979	1990	2000
Marital Status			
Married	22.759***	Ref	
Divorce/Separated/Widowed	13.105***	-0.734	
Never Married	Ref	NS	
Religion			
Protestant	Ref	Ref	Ref
No Religion	1.102	0.822	
Catholic	1.647*	1.143	1.278
Other Religion	1.192	0.924	1.360
Religiosity			
Not at all/infrequently	Ref	Ref	Ref
<3 per month	0.737	1.056	0.886
Once per week	0.620	1.157	1.086
>1 per week	0.166*	1.429	1.243
Race			
Mexican American	0.778	1.222	1.831
White	Ref	Ref	Ref
Generational Status Score	0.971	1.018	0.998
Education	0.899*	0.952	0.841
Occupation			
Professional	0.513	0.834	1.969*
Sales/Service	0.509**	Ref	Ref
Craft	0.759	0.633	1.796
No Work	Ref	1.117	0.810
Mixed Income	1.000	1.000***	1.000*
Home Ownership	1.702*	2.259***	2.915
n	3174	3174	3174

*** = Significant at 0.000 level
** = Significant at 0.001 level
* = Significant at 0.05 level
NS No Sample
Indicator not included in model

Table 11. Results of Logistic Regressions as Odds Ratio of Current Fertility of Mexican American, White, and Pooled Samples for 1979, 1990, and 2000.

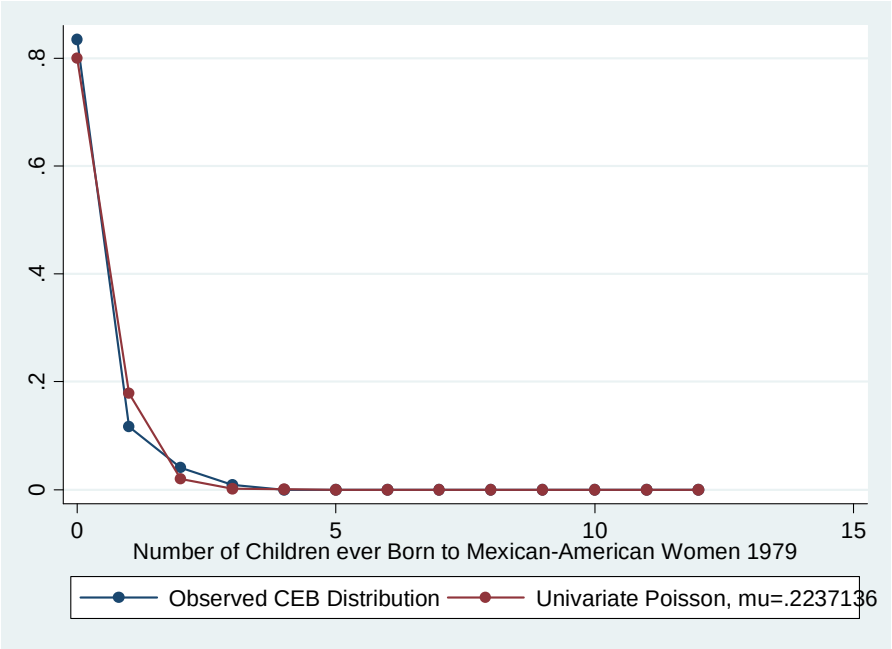
Indicators	1979	1990	2000
Age	1.385***	1.011	0.679***
Religiosity			
Not at all/infrequently	Ref	Ref	Ref
<3 per month	0.708	1.084	1.023
Once per week	0.494**	1.242	1.242
>1 per week	0.141**	1.426	1.317
Race			
Mexican American	1.107	1.315	1.849
White	Ref	Ref	Ref
Generational Status Score	0.985	0.978	0.952
Education	0.792***	0.950	0.973
Occupation			
Professional	0.255	0.831	1.606
Sales/Service	0.309***	Ref	Ref
Craft	0.542	0.633	2.054
No Work	Ref	1.129	0.796
Mixed Income	1.000***	1.000***	1.000
Home Ownership	2.688***	2.254***	2.989**
n	3174	3174	3174

*** = Significant at 0.000 level
** = Significant at 0.001 level
* = Significant at 0.05 level

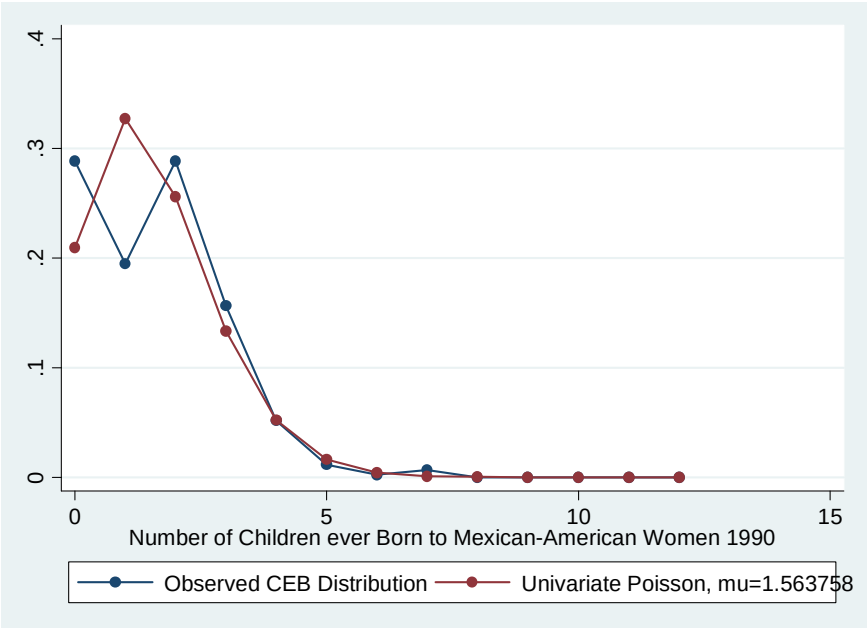
APPENDIX 2

Poisson Test
Mexican Americans

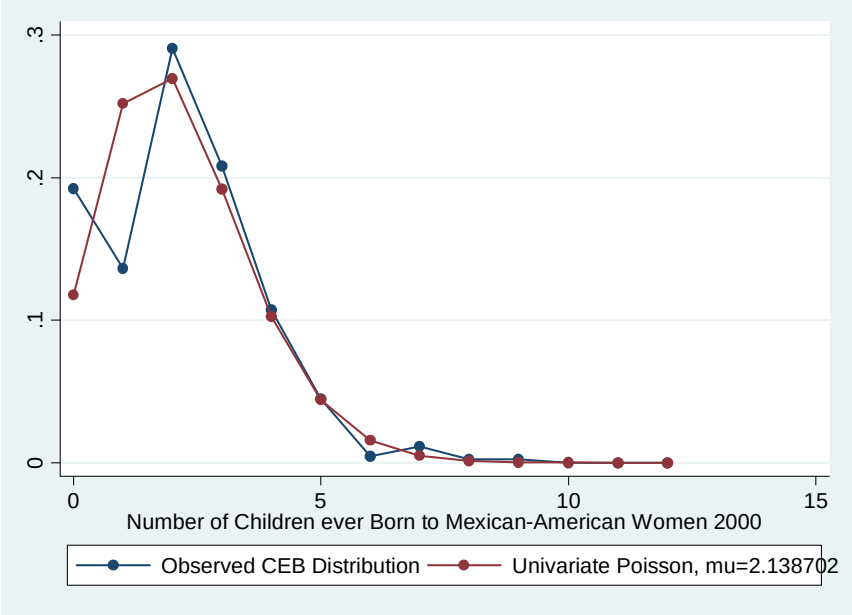
1979



1990

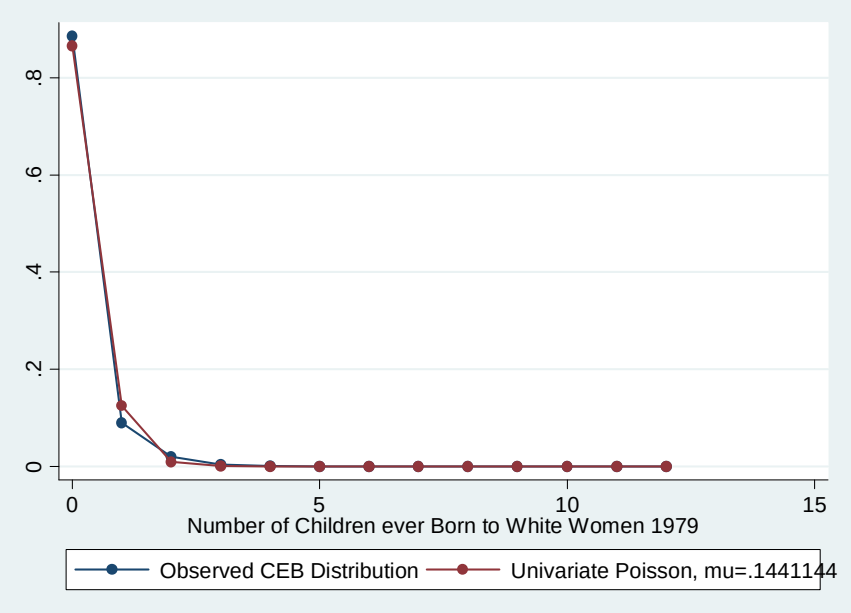


2000

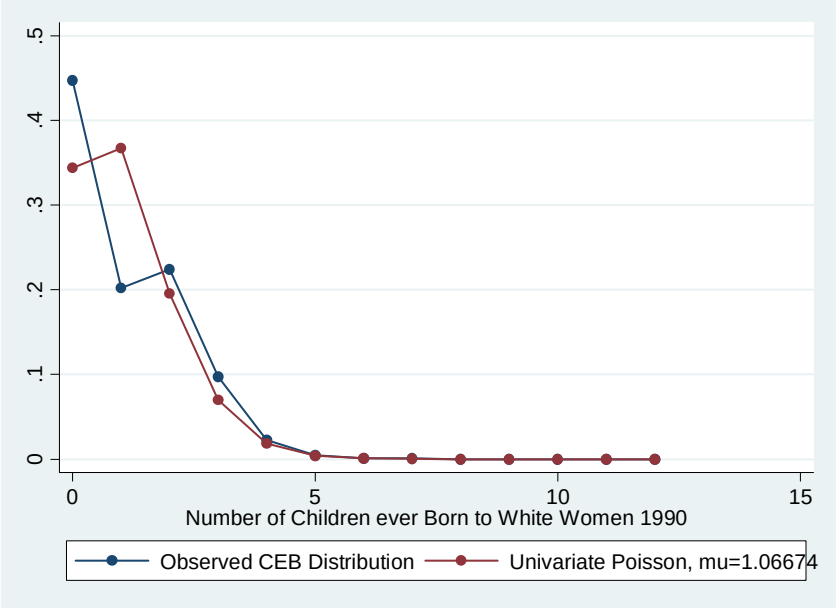


Poisson Test
Whites

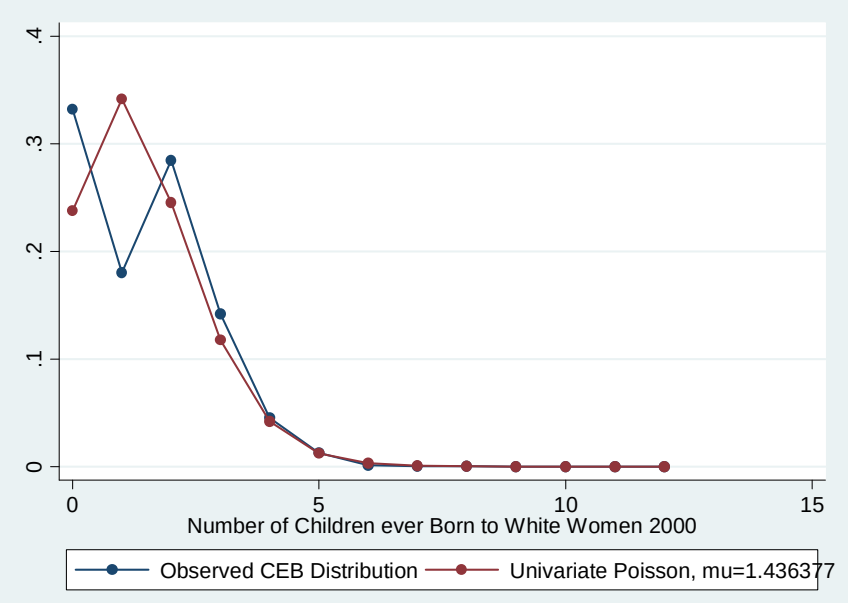
1979



1990


0
.1
.2
.3
.4
.5
0
5
10
15
Number of Children ever Born to White Women 1990
Observed CEB Distribution
Univariate Poisson, mu=1.06674

2000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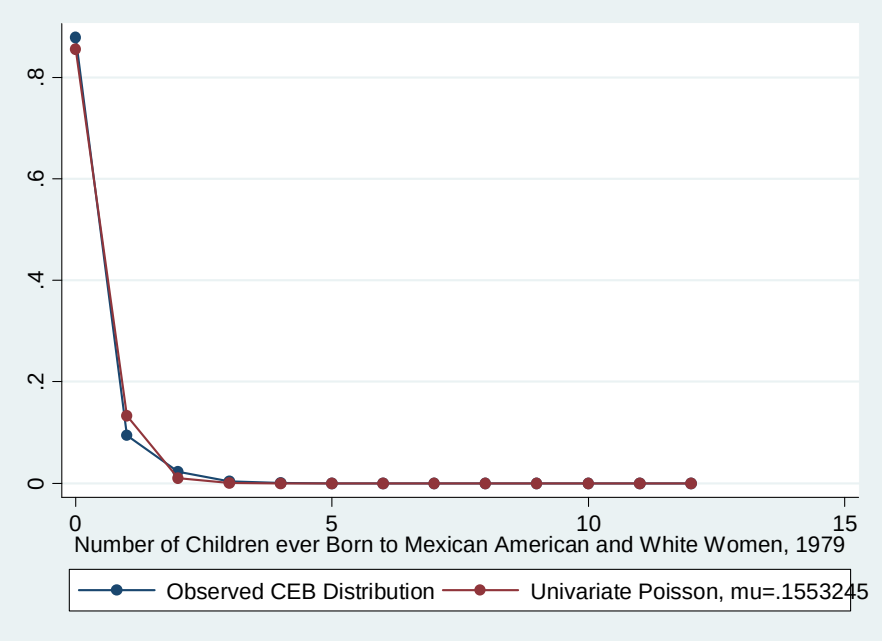
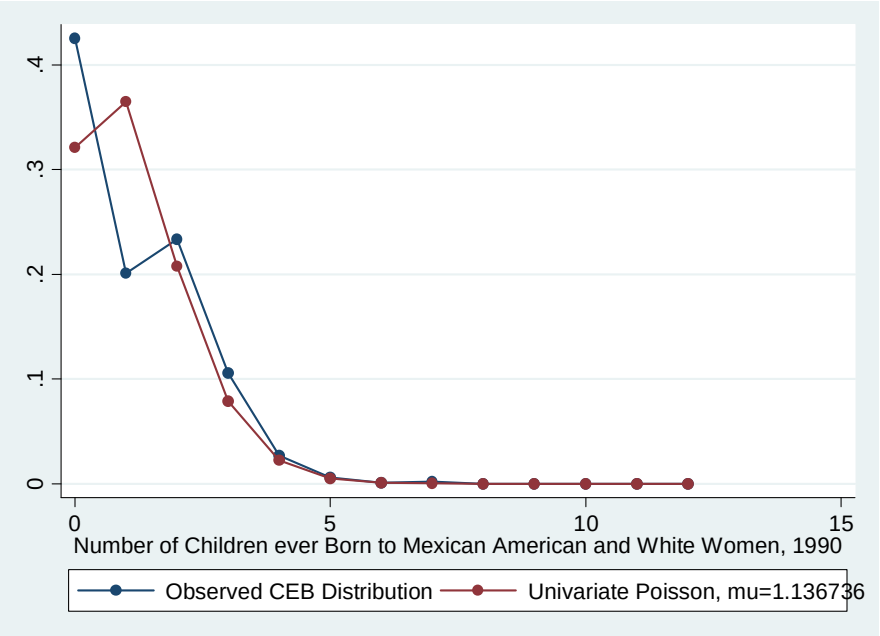
.2
.3
.4
0
5
10
15
Number of Children ever Born to White Women 2000
Observed CEB Distribution
Univariate Poisson, mu=1.436377

Poisson Test
Pooled Sample

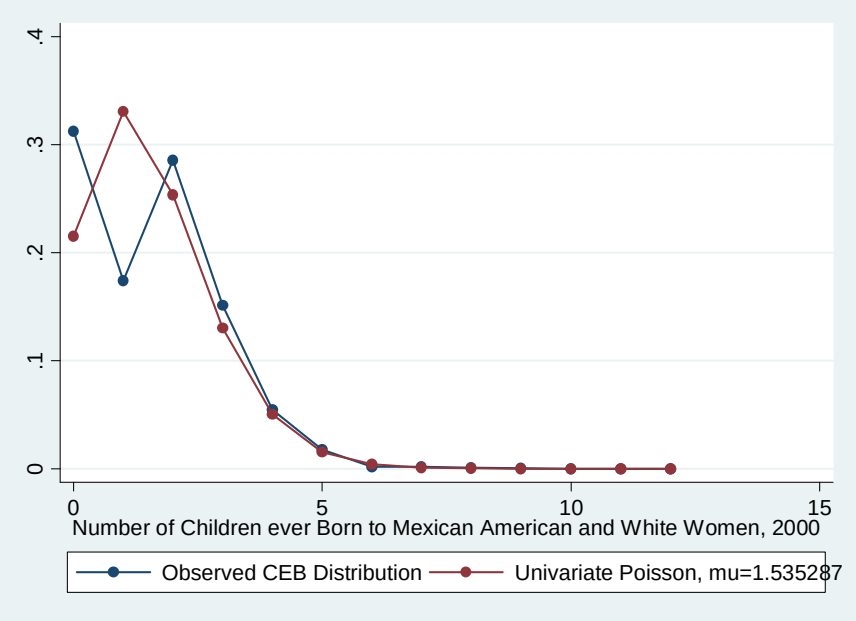
1979



1990



2000


.4
.3
.2
.1
0
0
5
10
15
Number of Children ever Born to Mexican American and White Women, 2000
Observed CEB Distribution
Univariate Poisson, mu=1.535287

APPENDIX 3

Table 12. Results of Zero Inflated Poisson Regressions of Children Ever Born of Mexican American Women for 1979, 1990, 2000.

Indicators	1979	1990	2000
Marital Status			
Married	2.754*		Ref
Divorce/Separated/Widowed	3.488		1.244
Never Married	Ref		NS
Religion			
Protestant	0.929	1.158	1.147
No Religion	1.919	0.918	
Catholic	Ref	Ref	Ref
Other Religion	1.121	0.675	0.761
Religiosity			
Not at all/infrequently	1.938*	1.140	Ref
<3 per month	0.983	0.951	1.088
Once per week	Ref	Ref	1.124
>1 per week	0.779	1.049	1.012
Generational Status Score	0.998	0.994	1.005
Education	0.886	0.962*	0.958**
Language			
Spanish	Ref	Ref	Ref
English	1.085	0.746	0.649*
Other Language	NS	NS	NS
Occupation			
Professional	NS	0.708	0.865
Sales/Service	0.493	Ref	Ref
Craft	0.925	1.076	1.239*
No Work	Ref	1.303*	1.155
Mixed Income	1.000	1.000	1.000
Home Ownership	1.197	1.279**	1.053
Method		Poisson Zero Inflated	
Prob>chi2	1.000	0.000	0.008
Alpha	0.104	0.007	0.000
Prob>= chibar2	0.084	0.429	0.499
Zero Inflated z	3.45	3.99	3.88
n	447	447	447

*** = Significant at 0.00 level

** = Significant at 0.01 level

* = Significant at 0.05 level

NS: No Sample

Indicator not included in model

Table 13. Results of Zero Inflated Poisson Regressions of Children Ever Born of Mexican American Women for 1979, 1990, and 2000.

Indicators	1979	1990	2000
Age	1.081	1.071	1.029
Generational Status Score	1.036	1.008	1.005
Education	0.874*	0.947**	0.955**
Occupation			
Professional	NS	0.709**	0.882
Sales/Service	0.254**	Ref	Ref
Craft	0.909	1.040	1.249*
No Work	Ref	1.226	1.137
Mixed Income	1.000	1.000	1.000
Home Ownership	1.006	1.268**	1.047
Method		Poisson Zero Inflated	
Prob>chi2	1.000	0.000	0.000
Alpha	0.117	0.000	0.000
Prob>= chibar2	0.259	0.500	0.500
Zero Inflated z	3.20	3.08	3.47
n	447	447	447

*** = Significant at 0.00 level

** = Significant at 0.01 level

* = Significant at 0.05 level

NS: No Sample

Table 14. Results of Zero Inflated Poisson and Negative Binomial Regressions of Children Ever Born of White Women for 1979, 1990, and 2000.

Indicators	1979	1990	2000
Marital Status			
Married	4.076***		Ref
Divorce/Separated/Widowed	4.500***		1.086
Never Married	Ref		NS
Religion			
Protestant	Ref	Ref	Ref
No Religion	0.922		0.828
Catholic	1.128	0.962	0.976
Other Religion	1.089	1.158*	0.985
Religiosity			
Not at all/infrequently	Ref	Ref	Ref
<3 per month	1.022	1.025	0.894*
Once per week	1.165	0.943	0.825***
>1 per week	0.707	0.983	0.892*
Generational Status Score	0.975		1.016
Education	0.758***	1.022	0.988
Language			
Spanish	0.724		1.031
English	Ref		Ref
Other Language	1.118		1.057
Occupation			
Professional	0.584	0.762***	0.960
Sales/Service	0.853	Ref	Ref
Craft	1.009	0.987	1.073
No Work	Ref	1.140*	1.052
Mixed Income	1.000	1.000*	1.000
Home Ownership	1.385*	1.040	1.184***
Method	Poisson Zero Inflated	Negative Binomial Zero Inflated	Poisson Zero Inflated
Prob>chi2	1.000	0.000	0.000
Alpha	0.000	0.226	0.002
Prob>= chibar2	0.499	0.000	0.457
Zero Inflated	3.50	19.640	9.76
n	2727	2727	2727

*** = Significant at 0.000 level

** = Significant at 0.001 level

* = Significant at 0.05 level

NS No Sample

Indicator not included in model

Table 15. Results of Zero Inflated Negative Binomial Regressions of Children Ever Born of White Women for 1979, 1990, and 2000.

Indicators	1979	1990	2000
Religion			
Protestant	Ref	Ref	Ref
No Religion	1.036	0.914	0.817
Catholic	1.184	0.946	0.992
Other Religion	1.318	1.140	1.012
Generational Status Score	0.998	1.015	1.009
Education	.701***	1.015	0.987
Mixed Income	1.000	1.000*	1.000
Home Ownership	1.750***	1.038	1.185***
Method	Zero Inflated Negative Binomial		
Prob>chi2	1.000	0.000	0.000
Alpha	1.241	0.261	0.027
Prob>= chibar2	0.000	0.000	0.094
Zero Inflated	5.08	17.630	10.30
n	2727	2727	2727

*** = Significant at 0.000 level

** = Significant at 0.001 level

* = Significant at 0.05 level

Table 16. Results of Zero Inflated Poisson and Negative Binomial Regressions of Children Ever Born of Mexican American, White, and Pooled Samples for 1979, 1990, and 2000.

Indicators	1979	1990	2000
Marital Status			
Married	4.761***		
Divorce/Separated/Widowed	5.602***		
Never Married	Ref		
Religion			
Protestant	Ref	Ref	Ref
NoReligion	1.016	0.901	1.195
Catholic	1.169	0.957	1.141
Other Religion	1.146	1.097	1.285
Religiosity			
Not at all/infrequently	Ref		
<3 per month	0.854		
Once per week	0.916		
>1 per week	0.660		
Race			
Mexican American	0.822	1.243	1.003
White	Ref	Ref	Ref
Generational Status	1.039	0.996	1.064*
Education	0.803***	0.987	0.765***
Occupation			
Professional	0.698		
Sales/Service	0.777		
Craft	0.928		
No Work	Ref		
Mixed Income	1.000	1.000***	1.000
Home Ownership	1.428	1.069	1.600
Method	Zero Inflated Poisson	Zero Inflated Negative Binomial	Zero Inflated Negative Binomial
Prob>chi2	1.000	0.000	0.000
Alpha	0.000	0.207	0.207
Prob>= chibar2	0.500	0.000	0.000
Zero Inflated	3.54	21.75	21.75
n			

*** = Significant at 0.000 level
** = Significant at 0.001 level
* = Significant at 0.05 level
NS No Sample
Indicator not included in Model

Table 17. Results of Zero Inflated Poisson and Negative Binomial Regressions of Children Ever Born of Mexican American, White, and Pooled Samples for 1979, 1990, and 2000.

Indicators	1979	1990	2000
Religiosity			
Not at all/infrequently	Ref	Ref	Ref
<3 per month	0.854	0.988	0.940
Once per week	0.824	0.929	0.889**
>1 per week	0.946	1.010	0.923
Race			
Mexican American	1.082	1.221**	1.287***
White	Ref	Ref	Ref
Generational Status Score	1.056	0.995	0.997
Education	0.766***	0.988	0.972***
Mixed Income	1.000	1.000***	1.000
Home Ownership	1.612***	1.081	1.149***
Method	Zero Inflated Negative Binomial	Zero Inflated Negative Binomial	Zero Inflated Poisson
Prob>chi2	1.000	0.000	0.000
Alpha	0.973	0.205	0.032
Prob>= chibar2	0.000	0.000	0.033
Zero Inflated	5.28	10.84	11.17
n	3174	3174	3174

*** = Significant at 0.000 level
** = Significant at 0.001 level
* = Significant at 0.05 level

Table 18. Significant Logistic Coefficients as Odds Ratio for Current Fertility of the Mexican American, White, and Pooled Samples for 1979, 1990, and 2000.

	Mexican American			Whites			Pooled Sample		
Indicators	**1979**	**1990**	**2000**	**1979**	**1990**	**2000**	**1979**	**1990**	**2000**
Age	1.443**		0.618**	1.405***		0.702***	1.385***		0.679***
Religiosity									
Not at all/infrequently <3 per month	3.010*		Ref	Ref	Ref	Ref	Ref	Ref	Ref
Once per week	Ref	Ref					0.494**		
>1 per week				0.075*			0.137**		
Race									
Mexican American									
White							Ref	Ref	Ref
Generational Status Score					0.914*				
Education	0.800*			0.761***	0.913*		0.793***		
Occupation									
Professional	NS								
Sales/Service		Ref	Ref	0.301***	Ref	Ref	0.309***	Ref	Ref
Craft					0.543*	2.721*			
No Work	Ref			Ref			Ref		
Mixed Income				1.000***	1.000***	1.000*	1.000***	1.000***	
Home Ownership		2.261*	5.496*	3.177***	2.330***	2.517*	2.689***	0.443***	2.989**
n	447	447	447	2727	2727	2727	3174	3174	3174

*** = Significant at 0.000 level

** = Significant at 0.01 level

* = Significant at 0.05 level

NS: No Sample

Table 19. Significant Zero Inflated Poisson and Negative Binomial Coefficients for Cumulative Fertility of the Mexican American, White, and Pooled Samples for 1979, 1990, and 2000.

	Mexican American			Whites			Pooled Sample		
Indicators	**1979**	**1990**	**2000**	**1979**	**1990**	**2000**	**1979**	**1990**	**2000**
Religiosity	n/a	n/a	n/a	n/a	n/a	n/a			
Not at all/infrequently							Ref	Ref	Ref
<3 per month									
Once per week									0.889**
>1 per week									
Race	n/a	n/a	n/a	n/a	n/a	n/a			
Mexican American								1.221**	1.287***
White							Ref	Ref	Ref
Generational Status Score									
Education	0.874*	0.947**	0.955**	.701***			0.766***		0.972***
Occupation				n/a	n/a	n/a			
Professional	NS	0.709**							
Sales/Service	0.254**	Ref	Ref						
Craft			1.249*						
No Work	Ref								
Mixed Income					1.000*			1.000***	
Home Ownership		1.268**		1.750***		1.185***	1.612***		1.149***
n	447	447	447	2727	2727	2727	3174	3174	3174

*** = Significant at 0.0001level
** = Significant at 0.01 level
* = Significant at 0.05 level
n/a: Indicator not included in the model

VITA

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	History: Minor	2000

Publications

Ayala, Maria Isabel. 2007. "Distributions, Frequency." Forthcoming in W.A. Darity (ed.), *International Encyclopedia of the Social Sciences*. 2nd ed. New York: Macmillan.

Saenz, Rogelio and **Maria Isabel Ayala**. 2007. "Migration." Forthcoming in W.A. Darity (ed.), *International Encyclopedia of the Social Sciences*. 2nd ed. New York: Macmillan.

Richardson, Chad, Ana Leos, and **María Isabel Ayala**. 2006. "Other Cultural Beliefs and Practices." Forthcoming in C. Richardson and R. Resendiz, *On the Edge of the Law Culture, Labor, and Deviance on the South Texas Border*. Austin: University of Texas Press.

Saenz, Rogelio, Janie Filoteo, and **Maria Isabel Ayala**. 2005. "Demographics." Pp. 68-73 in I. Stavans (ed.), *Encyclopedia Latina*. Vol. 2. New York: Grolier Publishers.

Saenz, Rogelio, Maria Cristina Morales, and **María Isabel Ayala**. 2004. "United States: Immigration to the Melting Pots of the Americas." Pp. 211-232 in M.I. Toro and M. Alicea (eds.), *Migration: A Global View*. Westport, CT: Greenwood Press.